



Eco Series

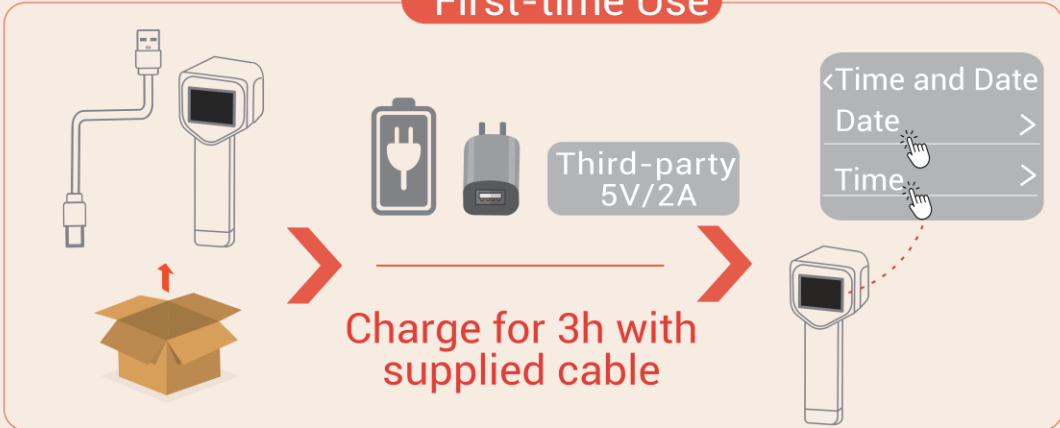
Thermal Camera User Manual



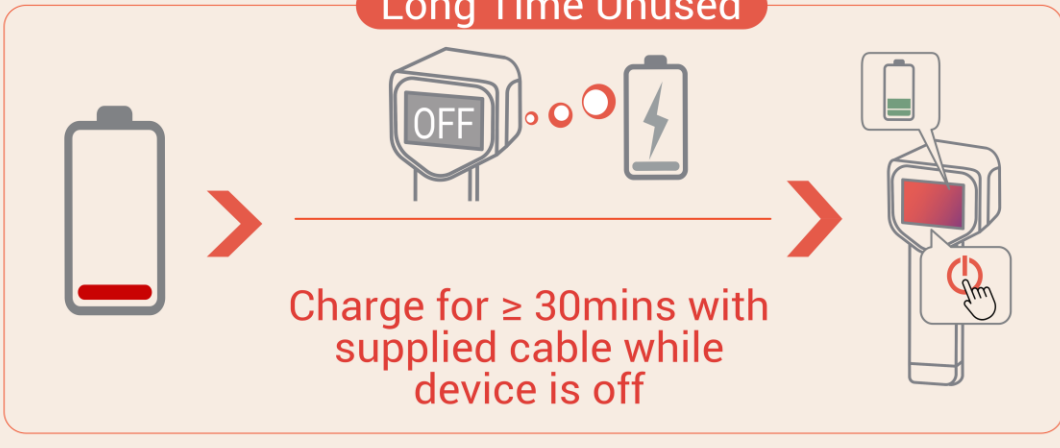
Contact Us



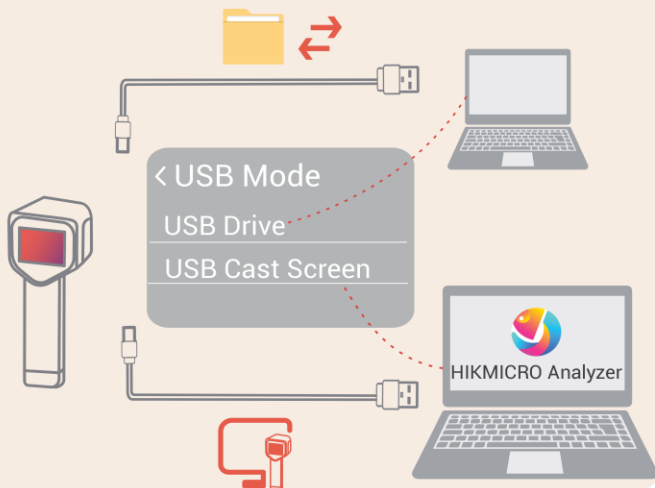
First-time Use



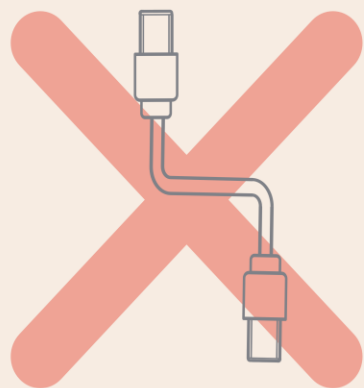
Long Time Unused



Use supplied cable for data transfer and screen casting



Third-party



SAFETY INSTRUCTION

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss. Please read all the safety information carefully before using.

Laws and Regulations

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

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.

Laser Light Supplement Warning (for laser supported models)



- ◆ Complies with FDA performance standards for laser products except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.
- ◆ Warning: The laser radiation emitted from the device can cause eye injuries, burning of skin or inflammable substances. Prevent eyes from direct laser. Before enabling the Light Supplement function, make sure no human or inflammable substances are in front of the laser lens.
- ◆ The wave length is 650 nm, the maximum power is 1 mW, and the beam divergence is 1 mrad. The laser meets the IEC 60825-1:2014, EN 60825-1: 2014 +A11: 2021 and EN 50689: 2021 standard.
- ◆ Instantaneous exposure to this class 2 laser product is safe, but gazing at this laser product may cause dizziness, flash blindness and visual afterimage. Move your head away or close your eyes to avoid the laser radiation. Besides, prevent eyes from direct laser and wear a pair of goggles for your safety. The operating wavelength of the eyewear should be longer than laser peak wavelength and its optical density should be higher than OD5+.
- ◆ Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- ◆ **Laser maintenance:** It is not necessary to maintain the laser regularly. If the laser does not work, the laser assembly needs to be replaced in the factory under warranty. Keep the device power off when replacing laser assembly. Caution-Use of controls or

adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ESD WARNING

- ◆ The camera lens is electrostatic-sensitive. Proper ESD protection required. Avoid touching the camera lens. Unauthorized contact may result in damage.

Power Supply

- ◆ If a power adapter is provided in the device package, use the provided adapter only. If no power adapter is provided, ensure the power adapter or other power supply complies with Limited Power Source or Limited-Energy Circuit. Please refer to technical specifications or product label 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 over-heating or fire hazards caused by overload.

Battery

- ◆ 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 in conformance with the instructions provided by the battery manufacturer.
- ◆ The built-in battery cannot be dismantled. Please contact the manufacture for repair if necessary.
- ◆ For long-term storage of the battery, make sure it is fully charged every 3 months to ensure the battery quality. Otherwise, damage may occur.
- ◆ Use the battery provided by a qualified manufacturer. Refer to the product specification for detailed battery requirements.
- ◆ DO NOT charge other battery types with the supplied charger. Confirm there is no flammable material within 2 m of the charger during charging.
- ◆ DO NOT place the battery near heating or fire source. Avoid direct sunlight.
- ◆ DO NOT swallow the battery to avoid chemical burns.
- ◆ DO NOT place the battery in the reach of children.
- ◆ When the device is powered off and the battery is full, the time settings can be kept for 60 days.
- ◆ The standard adapter power supply is 5 V.

Maintenance

- ◆ DO NOT maintain the camera when it is powered on, or it may cause electric shock! 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 the operating humidity shall be 95% or less.
- ◆ This device can only be safely used in the region below 2000 meters above the sea level.
- ◆ 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.
- ◆ DO NOT aim the lens at the sun or any other bright light.
- ◆ The device is suitable for indoor and outdoor uses, but do not expose it in wet conditions.

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 refer to <https://www.hikmicrotech.com/en/support>.

Technical Support

The <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.

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 for any necessary export license requirements if you intend to transfer, export, re-export the thermal series products between different countries.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
 Danger	Indicates a hazardous situation which, if not avoided, will or could result in death or serious injury.
 Caution	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
 Note	Provides additional information to emphasize or supplement important points of the main text.

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CHAPTER 1 INTRODUCTION

1.1 Important Notice to User

This manual describes and explains the features for multiple camera models. Because the camera models of a series have different features, this manual may contain descriptions and explanations that do not apply to your particular camera model.

Not all the camera models of a series support the mobile applications, software, and all their functions mentioned (or not mentioned) in this manual. Please refer to the user manuals of the application and software for more detailed information.

This manual is updated on a regular basis. It means that this manual may not contain the information about the new features of the latest firmware, mobile clients, and software.

1.2 Main Function

SuperIR

Device supports **SuperIR** to enhance the object outlines for better image display.

SuperScene Mode (If Applicable)

The camera supports multiple scenes for different detection targets and scenarios. Some scenes support Smart SuperScene, an intelligent function. It can assist in anomaly detection and give prompts on top of the live view interface.

Temperature Measurement

Device detects the real-time temperature, and displays it on the screen.

Palettes

The camera supports multiple color palettes for different targets and user preference.

Alarm

Device outputs visual alarm when the target's temperature is higher or lower than the threshold value.

Client Software Connection (If Applicable)



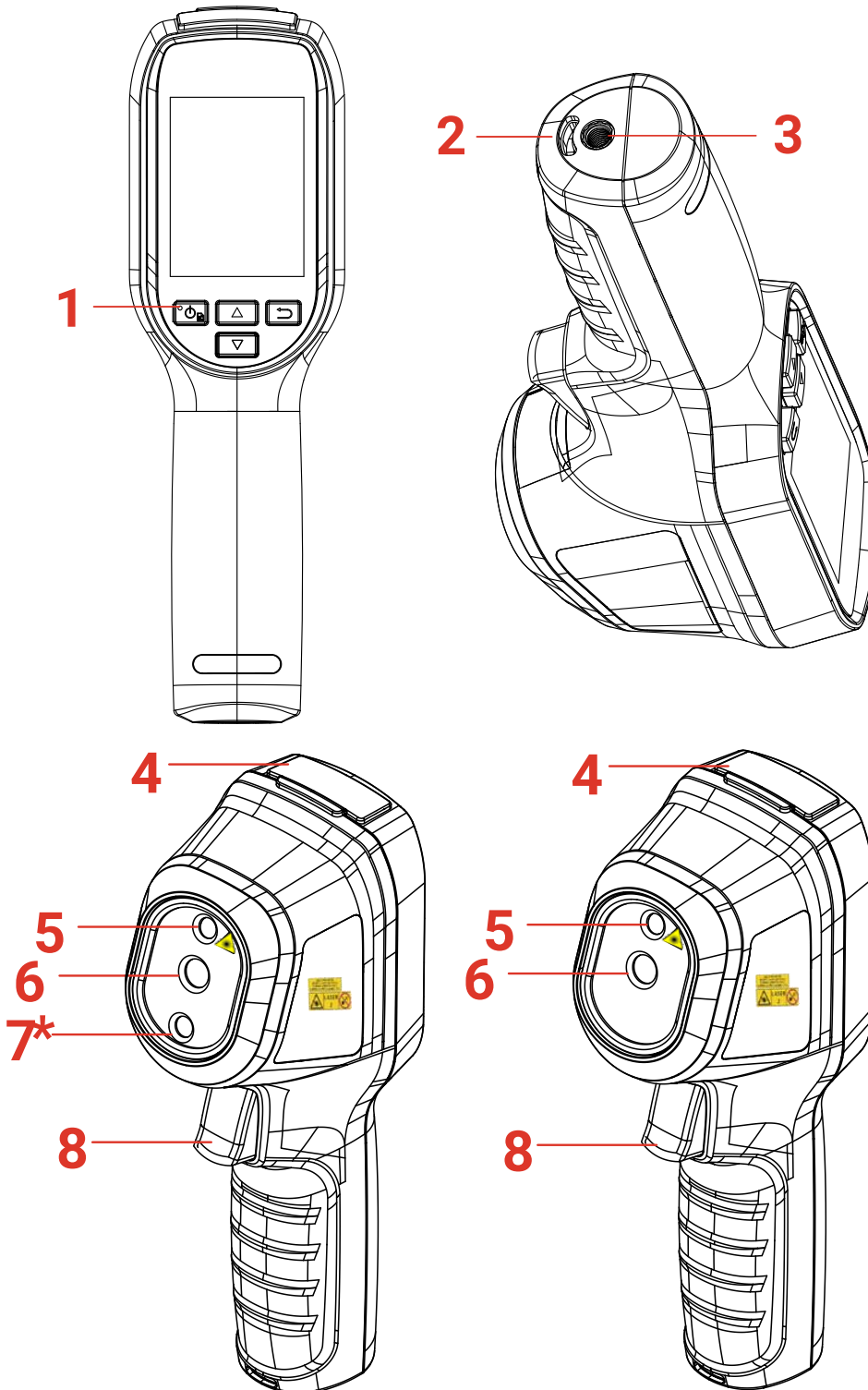
HIKMICRO Analyzer

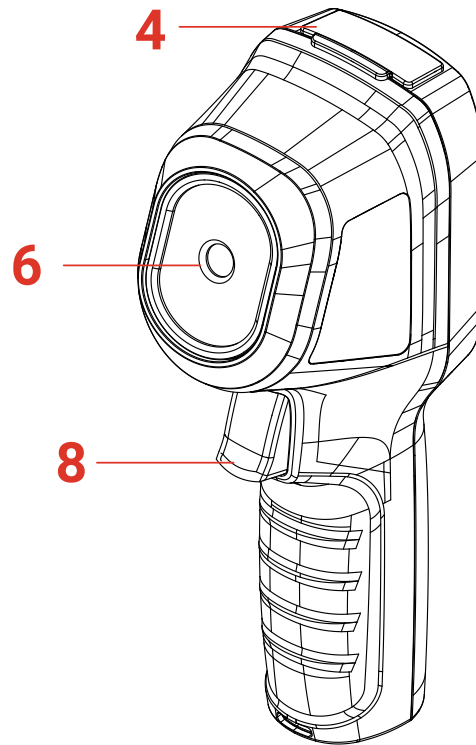
Download HIKMICRO Analyzer (<https://www.hikmicrotech.com/en/industrial-products/hikmicro-analyzer-software.html>) to analyze pictures.

NOTE Not all the camera models of this series support the mobile applications, software, and all their functions mentioned (or not mentioned) in this manual. Please refer to the user manuals of the application and software for more detailed information.









1.3 Appearance


The appearances and components of camera models might be different. Please refer to the actual products.





No.	Component	Function
1	Charging Indicator	<ul style="list-style-type: none"> ◆ Solid Red: Charging. ◆ Solid Green: Fully charged.
2	Wrist Strap Hole	Mount the wrist strap.
3	Tripod Mount	Connect to UNC 1/4"-20 tripod.
4	Type-C Interface	Charge the battery or export files.
5	Laser*	Locate the target position with laser light (only supported by certain models).
6	Thermal Lens	View the thermal image.
7*	Visual Lens*	View the visual image (only supported by certain models).
8	Trigger	<p>In live view:</p> <ul style="list-style-type: none"> ◆ Press: Capture snapshots. ◆ Hold: <ol style="list-style-type: none"> 1) Locate the target with laser light (for the models with laser light), and release to capture snapshots. 2) Record videos (if the laser is on, turn on the Record switch before recording). <p>In menu mode, press the trigger to go back to live view.</p>

Button	Function
	<ul style="list-style-type: none"> ◆ Hold: Power On/Off ◆ Press: Display menu or confirm operation.
	Exit the menu or return to previous menu.
	In menu mode: Press  and  to select parameters.
	In live view mode: Press  to switch image modes (only supported by certain models). Press  to switch palette.

 NOTE	<ul style="list-style-type: none"> ◆ The appearance and button functions vary according to different models. ◆ The visual lens is only supported by certain models. Please refer to the actual device or datasheet. ◆ The warning sign is beside the laser and on the left side of the device.
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 **Warning:**

The laser radiation emitted from the device can cause eye injuries, burning of skin or inflammable substances. Prevent eyes from direct laser. Before enabling the Light Supplement function, make sure no human or inflammable substances are in front of the laser lens. The wave length is 650 nm, and the power is less than 1 mW. The laser meets the IEC60825-1:2014 standard.

CHAPTER 2 PREPARATION

2.1 Charge Device

Plug in the included USB cable, and connect the device to the power supply via a power adapter to charge the device.

The power adapter (not included) should meet the following standards:

- ◆ Output Voltage/Current: 5 VDC/2 A
- ◆ Minimum Power Output: 10 W

Check the power indicator for the charging status:


- ◆ Solid red: charging normally
- ◆ Solid green: fully charged

**NOTE**

- ◆ The power delivered by the charger must be between min 6.7 Watts required by the radio equipment, and max 8.1 Watts in order to achieve the maximum charging speed.
- ◆ The device is equipped with the built-in battery. For the first charge, charge the device for more than 3 hours.
- ◆ If the camera is not in use for an extended period and is over-discharged, it is recommended to charge for at least 30 min before powering it on.
- ◆ It is recommended to use the USB cable included in the package for both charging and data transfer.

2.2 Power On/Off

Power On

Hold  for over eight seconds to turn on the device. You can observe the target when the interface of the device is stable.


**NOTE**

It may take at least 30 s until the device is ready for using after you power on it.

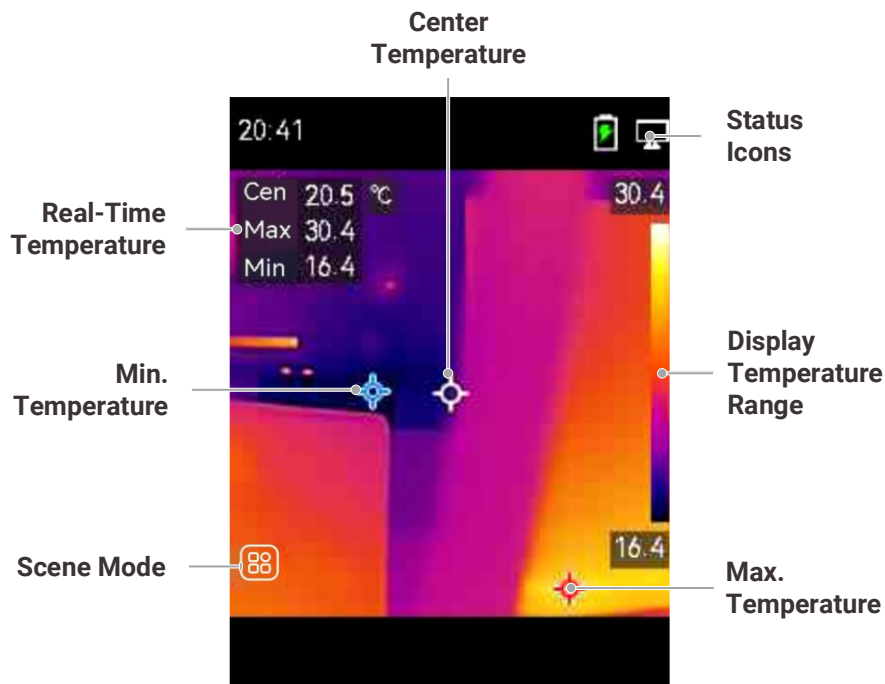
Power Off

When the device is turned on, hold  for about two seconds to power off the device.

Set Auto Power-Off

In the live view interface, press , and go to **More Settings > Auto Power-off** to set the automatic shutdown time for device as required.

2.3 Live View

**NOTE**

- ◆ Because this manual is updated on a regular basis, the live view might be slightly different from the version of your particular camera model. Please refer to the actual camera.
- ◆ If the temperature value is preceded by a "~", it indicates that the temperature measurement function has not reached a precise state. This symbol usually appears during the device startup phase and disappears once the temperature measurement function is fully operational.
- ◆ The picture is for demonstration ONLY. Please refer to your device.

CHAPTER 3 START WITH SUPERSCENE MODE (IF APPLICABLE)



To conduct fast anomaly detection, several preset templates are included in **SuperScene Mode** for various detection scenarios. Users can choose an appropriate scene or customize a scene as per targets, and set temperature alarm as needed.

NOTE SuperScene Mode is ONLY supported by some models in the series. Please refer to your actual device and its software version.

1. Select an appropriate scene. See **3.1 Select a Scene** for details.
2. (Optional) Fine-tune scene parameters as needed. See **3.2 (Optional) Set Scene Parameters** for details.
3. (Optional) Set alarms as needed. See **Chapter 5 Set Alarms** for details.
4. Observe detection results in live view interface.

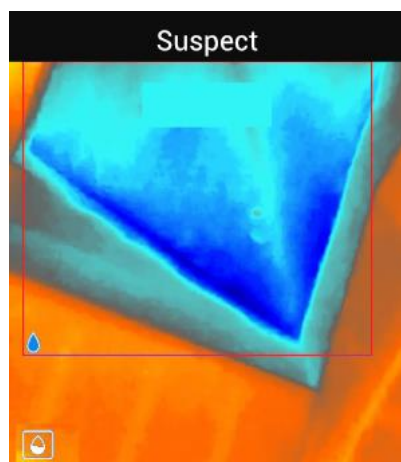
3.1 Select a Scene

Choose a scene according to the faults or anomalies you want to locate in a specific detection scene.

1. In the live view interface, press  and go to **SuperScene Mode > Scene**.
2. Press  to select an appropriate scene.

NOTE Default value of parameters work for most cases. If users want to fine-tune the related parameters as needed, see **3.2 (Optional) Set Scene Parameters**.

Water Leak



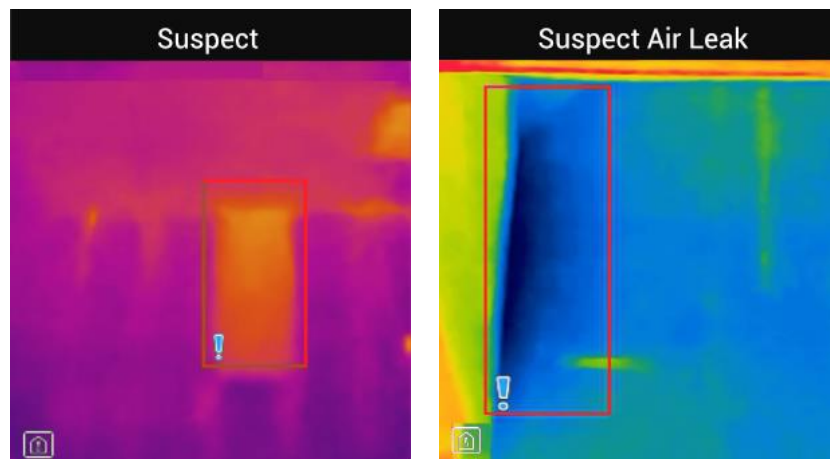
To inspect the water leak of building ceilings, walls and floors indoors.

Smart SuperScene technology can assist in fast recognition for anomalies during water leak detection. When **Smart SuperScene** is enabled and water leak anomalies are detected, **Suspect** will be displayed on top of live view and suspect leak areas will be

marked with red frames.

NOTE

- ◆ False alarms and missed detection may occur when temperature difference of the areas with water leak anomalies is too subtle to be recognized, or when the thermal imaging features are not obvious.
- ◆ It is recommended to give a second diagnosis based on Smart SuperScene function. The algorithm of Smart SuperScene function is being updated.
- ◆ When SuperIR and Smart SuperScene are enabled simultaneously, the frame rate will be decreased.

Insulation

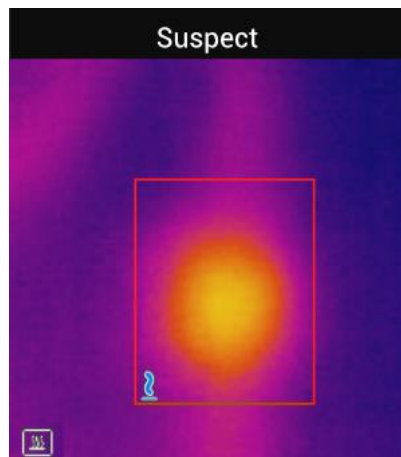
To detect indoor insulation deficiency of building walls, ceilings, common users can apply this scene.

Smart SuperScene technology can assist in fast recognition for anomalies during insulation detection. When **Smart SuperScene** is enabled and insulation anomalies are detected, **Suspect** will be displayed on top of live view and suspect areas will be marked with red frames. If air leak points are detected, **Suspect Air Leak** will be displayed on top of live view and suspect areas will be marked with red frames.

NOTE

- ◆ False alarms and missed detection may occur when temperature difference of the areas with insulation anomalies is too subtle to be recognized, or when the thermal imaging features are not obvious.
- ◆ It is recommended to give a second diagnosis based on Smart SuperScene function. The algorithm of Smart SuperScene function is being updated.
- ◆ When SuperIR and Smart SuperScene are enabled simultaneously, the frame rate will be decreased.

Floor Heating



To detect and observe the faults of floor heating system.

Smart SuperScene technology can assist in fast recognition for anomalies during floor heating detection. When **Smart SuperScene** is enabled and floor-heating anomalies are detected, **Suspect** will be displayed on top of live view and suspect areas will be marked with red frames.



NOTE

- ◆ False alarms and missed detection may occur when temperature difference of the areas with floor heating anomalies is too subtle to be recognized, or when the thermal imaging features are not obvious.
- ◆ It is recommended to give a second diagnosis based on Smart SuperScene function. The algorithm of Smart SuperScene function is being updated.
- ◆ When SuperIR and Smart SuperScene are enabled simultaneously, the frame rate will be decreased.

Electrical Faults

To detect and observe the faults of wires, circuits, and electrical components, terminators, etc.

Solar Panel



To detect and observe the faults of solar panels.

Custom

Users can customize a mode to save desired temperature measurement parameters for future use. See 3.2 (Optional) Set Scene Parameters.

3.2 (Optional) Set Scene Parameters

To obtain a more precise detection results, users can fine-tune the related parameters

1. In **SuperScene Mode**, choose an appropriate scene and then press  to set parameters.
2. Adjust the parameters according to the table.
3. Press  to save and exit.

 **NOTE** Parameters vary from the different scenes.

Parameters	Description
Distance	Set the distance between the camera and the observation target.
Emissivity	Set the emissivity according to your target.
Palettes	Thermal images are created by temperature difference. Users can switch different palettes as preferred.
Level & Span	Temperature scale on right side supports browsing color-temperature relationship in the image. Set the level & span parameters to get better image contrast. See 6.4 Set Level & Span.
Temperature Range	Select the temperature measurement range. The device can detect the temperature and switch temperature measurement range automatically in Auto Switch mode.
Alarm	When the temperature of targets triggers the set alarm rule, users can be notified in the set ways. See <i>Chapter 5 Set Alarms</i> .
Color Distribution	<p>Linear and Histogram modes are selectable for different application scenes, so as to display more details.</p> <ul style="list-style-type: none"> ◆ Linear: Detect small high temperature targets in low temperature background to enhance and display more details of high temperature targets, such as cable connectors. ◆ Histogram: Detect small low temperature targets in high temperature areas to enhance temperature difference and remain details of low temperature objects, such as cracks.

CHAPTER 4 PRECISE TEMPERATURE MEASUREMENT

To get more precise and real-time temperature of the target, user can set spot tools and alarm as needed.




1. For models with SuperScene Mode, select a proper scene to speed up the measurement settings. See **Chapter 3 Start With SuperScene Mode (If Applicable)**.
2. Verify temperature values in the top-left corner of live view. If they are not precise enough, fine-tune temperature measurement parameters. See **4.1 Set Temperature Measurement Parameters**.
3. (Optional) Users set spot tools to get the real-time temperature of the max/min/center temperature spot. See **4.2 Set Measurement Tools**.
4. (Optional) Users can enable the thermometer mode to use the laser pointer function. See **4.3 (Optional) Set Thermometer**.
5. (Optional) Set the alarm. The target whose temperature value is above or below the set threshold value can trigger the alarm. See **Chapter 5 Set Alarms**.

4.1 Set Temperature Measurement Parameters

You should set temperature measurement parameters before measuring temperature.

4.1.1 Adjust Distance

The distance between the camera and the observation target affects the accuracy of the temperature results. Before temperature measurement, users should set the distance first.

1. In the live view interface, press  to show the menu.
2. Press  to select **Distance**, and then set parameters.
3. Press  to save and exit.






NOTE

For models with SuperScene Mode, distance can be adjusted both within the SuperScene menu and in the settings interface. Parameters adjusted in the settings interface will also change accordingly in the SuperScene menu.

4.1.2 Adjust Emissivity


Emissivity directly affects the measurement accuracy and it is necessary to be re-adjusted according to the characteristics of the target material.

1. In the live view interface, press  to show the menu.
2. Press  to select **Emissivity**, and then set parameters.
3. Press  to save and exit.

NOTE For models with SuperScene Mode, emissivity can be adjusted both within the SuperScene menu and in the settings interface. Parameters adjusted in the settings interface will also change accordingly in the SuperScene menu.





4.1.3 (Optional) Adjust Other Parameters

To improve the accuracy of temperature measurement, fine-tune temperature measurement parameters.

- ◆ **Temperature Range:** Go to **Settings > Temperature Range**, and select the temperature measurement range. The device can detect the temperature and switch temperature measurement range automatically in Auto Switch mode.
- ◆ **Unit:** Go to **Display Settings > Unit**, and press  to set the temperature unit.

4.2 Set Measurement Tools

Device measures the temperature of the whole scene and can be managed to display the center, hot, and cold spot in the scene.

1. In the live view interface, press  to show the menu.
2. Press  to select **Therm. Settings**.
3. Select the desired spots to show their temperatures, and press  to enable them.
 - ◆ **Max:** Display the hot spot in the scene and show the max. temperature.
 - ◆ **Min:** Display the cold spot in the scene and show the min. temperature.
 - ◆ **Cen:** Display the center spot in the scene and show the center temperature.
4. Press  to save and exit.

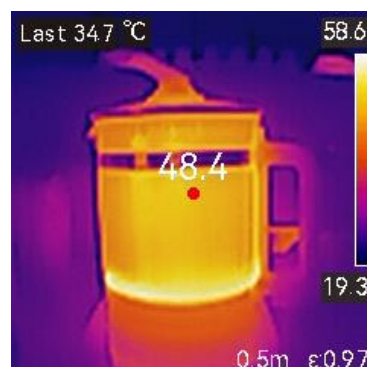
NOTE If there is serious inaccuracy in temperature results, turn off SuperTemp button by More Settings > SuperTemp. SuperTemp function is ONLY supported by some models.




Result

The device shows the real-time temperature on the upper left side of live view interface.


4.3 (Optional) Set Thermometer

The **Thermometer** utilizes a laser pointer to help users quickly locate temperature measurement points. When enabled, the laser pointer indicates the target in the scene, allowing users to visualize its temperature in real time. Devices without laser do not support this mode.



1. In the live view, press  to show the menu,
2. Go to **Therm. Settings** then press  to enable **Thermometer**.
3. Press  to save and exit.
4. Back to the live view, a red indicator dot will appear at the center of the screen, accompanied by the temperature value of the target (consistent with the center point temperature).
5. Optional:
 - ◆ Capture pictures
Press the trigger. The imager will automatically capture an image of the current scene and save the temperature data. Users can view the data captured since the last trigger release in the upper-left corner of the real-time interface.
 - ◆ Record videos
 - 1) Enable video recording, hold the trigger in live view interface. The device emits a laser to point at the target, and a red indicator dot remains at the center of the screen. The real-time temperature value of the target is shown around the indicator dot.
 - 2) Release the trigger after the recording time and icon appear. The device continues recording, and the indicator dot disappears.
 - 3) Press the trigger completes the recording. The imager will display a pop-up notification saying "Recording Succeeded". The recording video will be saved.



**NOTE**


- ◆ In the Thermometer mode, laser can be turned off. Go to **More Settings** then press  to turn off **Laser**.
- ◆ In the Thermometer mode, the maximum, minimum, and center temperature values are not displayed in the top-left corner of the observation interface.





CHAPTER 5 SET ALARMS

Set the alarm rules and the device will alarm when the temperature triggers the rule.





For models with SuperScene Mode:

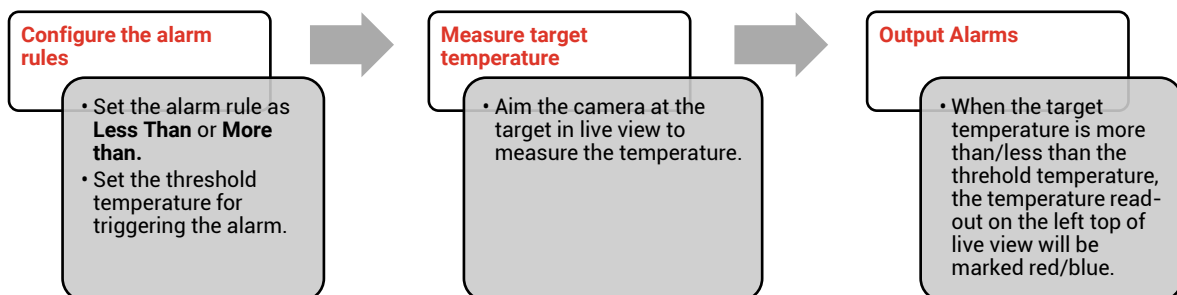
1. In the **SuperScene Mode**, choose an appropriate scene and then press  to set parameters.
2. Press , and select **Alarm** to turn it on.

 **NOTE** ONLY some scenes support Alarm. Please refer to your actual device.

3. Select **Measurement** to set the alarm rule. Select **Alarm Threshold** to set the threshold temperature. When the target's temperature is higher or lower than the threshold value, the device will output alarm.
4. Press  to save and exit.
5. Press , and press  to enable the **Alarm Linkage** function.
 - ◆ **Alarm Mode Palettes:** When the target's temperature is higher than the set value, the target will become red; when the target's temperature is lower than the set value, the target will become blue (only supported by certain models).
6. Press  to save and exit.

For models without SuperScene Mode:


1. In the live view interface, press  to show the menu.
2. Press , select **Alarm** and turn it on.
3. Press  to enable the **Alarm Linkage** function.
 - ◆ **Alarm Mode Palettes:** When the target's temperature is higher than the set value, the target will become red; when the target's temperature is lower than the set value, the target will become blue (only supported by certain models).
4. Select **Measurement** to set the alarm rule. Select **Alarm Threshold** to set the threshold temperature. When the target's temperature is higher or lower than the threshold value, the device will output alarm.
5. Press  to save and exit.



CHAPTER 6 DISPLAY SETTINGS

6.1 Set SuperIR

The device supports **SuperIR** on live view (for some models) and on snapshots. Turn on **SuperIR** to enhance the object outlines for better image display. The actual effect is subject to the actual product.

Go to **Settings > SuperIR**, and press  to turn it on/off.

- ◆ On live view: For some models, the object outlines can be enhanced in live view when SuperIR is on.
- ◆ On captured images: the object outlines in the image are enhanced after SuperIR is on.




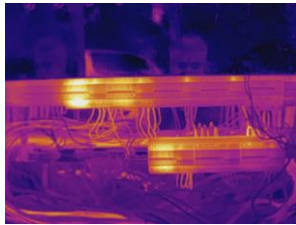
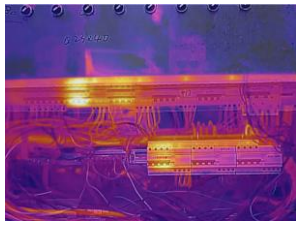

NOTE

When SuperIR and Smart SuperScene are enabled simultaneously, the frame rate will be decreased.


6.2 Set Image Modes

You can set image modes of the device. **Image Mode** is only supported by certain models. Please refer to the actual device or the datasheet.

1. Select an image mode by the following ways:
 - ◆ Go to **Settings > Image Settings > Image Mode**, and select a preferred image mode.
 - ◆ Press  in live view to switch image modes.



<i>Image Mode</i>	<i>Description</i>	<i>Example</i>
Thermal	In thermal mode, the device displays the thermal view.	
Fusion	Thermal object image with visual outlines. This function is only supported by the models with visual lens.	
Visual	Visual object image only. This function is only supported by the models with visual lens.	


2. Press  to save and exit.

 **NOTE** Your camera will periodically perform a self-calibration to optimize image quality and measurement accuracy. In this process, the image will pause briefly and you'll hear a "click" as a shutter moves in front of the detector. The prompt "Image Calibrating ..." appears in the upper center of the screen as the device is calibrating itself. The self-calibration will be more frequent during start up or in very cold or hot environments. This is a normal part of operation to ensure optimum performance for your camera.

6.3 Set Palettes




The palettes allow you to select the desired colors. You can switch palettes by the following ways:

- ◆ Go to **Settings > Palettes** to select a preferred palette, and press  to save and exit.
- ◆ Press  in live view to switch palettes.

 **NOTE** If the device supports SuperScene Mode, specific palettes can be switched in "Settings > SuperScene Mode." Some scene do not support palettes switching; see [3.2\(Optional\) Set Scene Parameters](#) for details.

6.4 Set Level & Span

Set a display temperature range and palette only works for targets within the temperature range. You can get better image contrast by adjusting the level & span parameters.





1. In the live view interface, press  to show the menu.
2. Press  and select **Level & Span**.
3. Select **Setting Mode**, and press  to switch auto and manual adjustment.

Auto

In Auto mode, the device adjusts display temperature range automatically.

Manual

In Manual mode, select Parameters to enter the setting interface.

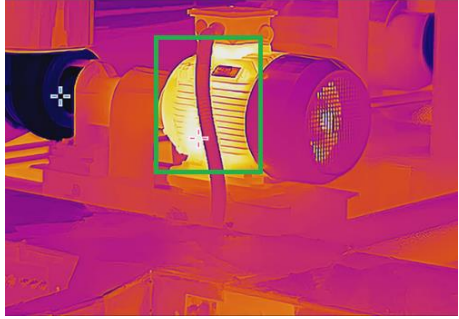
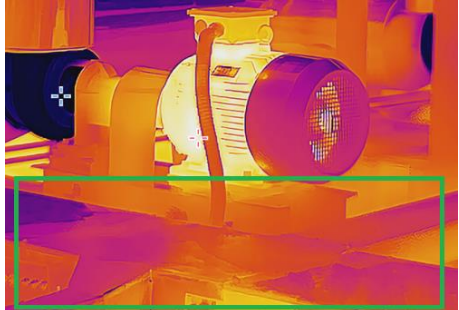
- ◆ Press  to lock or unlock the max. temperature and min. temperature, and press  to adjust unlocked value. Or, unlock the max. temperature and min. temperature, and press  to increase or decrease the individual values while remaining the same temperature range.
 - ◆ You can also enable **Persist Saved**.
 Enable Persist Saved: the current manual mode settings will be retained after restarting the device.
 Disable Persist Saved: the current manual mode settings will not be retained after restarting, and the device will revert to automatic mode.
4. Press  to save and exit.

 **NOTE** If the device supports SuperScene Mode, adjust the Level & Span in SuperScene Mode. See 3.2(Optional) Set Scene Parameters for details.


6.5 Color Distribution

Color distribution function provides different image display effects in auto level & span. Linear and histogram color distribution modes can be selected for different application scenes.

1. Go to **Image Settings > Color Distribution**.
2. Select a color distribution mode.

Mode	Description	Example
Linear	Linear mode is used to detect small high temperature targets in low temperature background. Linear color distribution enhances and displays more details of high temperature targets, which is good for checking small high temperature defective areas such as cable connectors.	
Histogram	Histogram mode is used to detect temperature distribution in large areas. Histogram color distribution enhances high temperature targets and remains some details of low temperature objects in the area, which is good for discovering small low temperature targets such as cracks.	

3. Press  to save and exit.

 **NOTE** This function is only supported in auto level & span. If the device supports SuperScene Mode, adjust the Level & Span in SuperScene Mode. See 3.2(Optional) Set Scene Parameters for details.

6.6 Set Screen Brightness

Go to **Settings > Display Settings > Screen Brightness** to adjust the screen brightness.

6.7 Display On-Screen Info

Go to **Settings > Display Settings** to turn on/off the information on-screen display.

◆ **Parameters:** Temperature measurement parameters, for example, target emissivity, temperature unit, etc.

◆ **Brand Logo:** The brand logo is a manufacturer logo displayed at the middle bottom of the screen.

- ◆ **Temperature Scale:** Display the palettes bar and temperature range on the right side of the screen.

CHAPTER 7 SNAPSHOTS AND VIDEOS

7.1 Capture Snapshots

You can capture snapshots in live view, and a thumbnail of the snapshot is displayed in live view. The snapshot will be automatically saved in the albums.

In the live view interface, you can capture snapshots by the following ways.

- ◆ Press and release the trigger in live view to capture snapshots.
- ◆ Hold the trigger in live view to locate the target with laser light, and release the trigger to capture snapshots (only supported by the models with laser light).



◆ For models with laser, go to **More Settings > Laser** to turn on/off laser light.

◆ You cannot capture snapshots when the device is connected with PC.

You can also set the following parameters in **Settings > Capture Mode** before capturing snapshots.

Parameters	Description
Capture Mode	<ul style="list-style-type: none"> ◆ Capture One Image: Press the trigger once to capture one image. ◆ Scheduled Capture: Set Interval (the time interval of each snapshot to be taken) and Number (the number of snapshots to be taken in a roll, ranging from 1 to 10,000) for scheduled capture. Press the trigger in live view, and the device captures the set number of images according to the set interval. Press the trigger again to stop capturing.
File Naming	The files can be named after Time Stamp or Numbering (filename header + sequence number).
Save Visual Image	If a visual image is needed to be saved separately, you can enable Save Visual Image (only supported by the models with visual lens).



◆ For **Scheduled Capture**, a counter displays in live view showing the completed amounts of capturing.

7.2 Record Video



Since video recording and the laser share the same trigger button:









- ◆ For devices without laser, follow **step 2 and 3** for recording.
- ◆ For devices with laser, follow **step 1 to 3** for recording.

1. **Optional:** In the live view interface, press and go to **Settings > Capture Mode**. Press and enable **Record**. Press to save and back to the live view.
2. Hold the trigger in live view. When the recording icon and time display in the interface, recording begins, and you can release the trigger.









3. Press the trigger completes the recording. The device will display a pop-up notification saying "Recording Succeeded". The recording video will be saved.

7.3 View Snapshots and Videos

7.3.1 View Snapshots

1. In the live view interface, press  to show the menu.
2. Press  to select **Albums**, and press  to enter the album.
3. Press  to select the snapshot, and press  to view it.
4. **Optional:** Press  to delete picture in picture view interface. Press  to switch the picture.
5. Press  to exit.

7.3.2 View Videos

1. In the live view interface, press -  to show the menu.
2. Press  to select **Albums**, and press  to enter the album.
3. Press  to select the video, and press  to view it.
4. **Optional:** Press  to delete video in view interface. Press  to switch the picture.
5. Press  to exit.

7.4 Export Snapshots and Videos

1. Connect the device to your PC with the supplied USB cable, and select **USB Drive** mode in the prompt on device.
2. Open the detected disk, copy and paste the videos or snapshots to PC to view the files.
3. Disconnect the device from your PC.

**NOTE**

For the first connection, the driver will be installed automatically.

CHAPTER 8 CAST DEVICE SCREEN TO PC


The device supports casting screen to PC by HIKMICRO Analyzer. You can connect the device to your PC via the supplied USB cable, and cast the real-time live view of the device to your PC.

Please visit our website www.hikmicrotech.com or contact our technical supports or customer service teams for installation packages, and download and install HIKMICRO Analyzer.

See the user manual of HIKMICRO Analyzer client for specific connection and more operations.

CHAPTER 9 MAINTENANCE

9.1 Set Time and Date

In the live view interface, press  and go to **Display Settings > Time and Date** to set the information.

9.2 Set Language



Go to **More Settings > Language** to select a required language.


9.3 Save Operation logs

The device can collect its operation logs and save in the storage only for troubleshooting. You can turn on/off this function in **Settings > More Settings > Save Logs**.

You can connect the camera to PC using the supplied USB cable, and select **USB Drive** as the USB mode on camera to export the operation logs in the root directory of the camera, if necessary.

9.4 Format Storage

1. In the live view interface, press  and go to **More Settings > Format Storage**.
2. Press  and select **OK** to start formatting storage.

 **NOTE** Format storage before first use.

9.5 View Device Information

Go to **More Settings > About** to view the detailed information of the camera, such as firmware version, serial number, etc.

9.6 Upgrade

Before You Start

Please download the upgrade file from the official website <http://www.hikmicrotech.com> or contact the customer service and technical support to get the upgrade file first.


1. Connect the device to your PC via the supplied USB cable, and select **USB Drive** as the USB mode in the prompt on the device.
2. Unzip the upgrade file and copy it to the root directory of the device.

3. Disconnect the device from your PC.
4. Reboot the device and then it will upgrade automatically. The upgrading process will be displayed in the main interface.

**NOTE**

After the upgrading, the device automatically reboot. You can view the current version in **More Settings > About**.

9.7 Restore Device

In the live view interface, press  and go to **More Settings > Restore Device** to initialize the device and restore default settings.

CHAPTER 10 **FAQ**

10.1 Frequently Asked Questions (FAQ)

Scan the following QR code to get device common FAQ.



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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 (<http://www.hikmicrotech.com>).

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

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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) and Directive 2011/65/EU (RoHS).

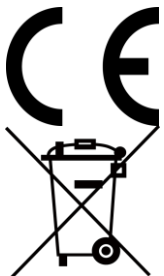
For the device without a supplied power adapter, use the power adapter provided by a qualified manufacturer. Refer to the product specification for detailed power requirements.

For the device without a supplied battery, use the battery provided by a qualified manufacturer. Refer to the product specification for detailed battery requirements.



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www.recyclethis.info



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Industry Canada ICES-003 Compliance

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

Conformité Industrie Canada ICES-003

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

KC

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