



# HIKVISION UD18508N Thermographic Handheld Camera User Manual

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## Thermographic Handheld Camera User Manual



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

### Trademarks Acknowledgement

- Trademarks and logos mentioned are the properties of their respective owners.

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## Regulatory Information

### FCC Information

Please take attention that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. FCC compliance: This equipment has been tested and found to comply with the limits for a Class A digital

device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

### EU Conformity Statement



This product and, if applicable, the supplied accessories are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Radio Equipment Directive 2014/53/EU, the EMC Directive 2014/30/EU, the RoHS Directive 2011/65/EU.



#### 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 [www.recyclethis.info](http://www.recyclethis.info).



2006/66/EC (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](http://www.recyclethis.info).



## Safety Instruction

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

The precaution measure is divided into **Warnings** and **Cautions**:

**Warnings:** Neglecting any of the warnings may cause serious injury or death.

**Cautions:** Neglecting any of the cautions may cause injury or equipment damage.

	
<b>Warnings</b> Follow these safeguards to prevent serious injury or death.	<b>Cautions</b> Follow these precautions to prevent damage.



### Warnings

- The device should be used in compliance with local laws and electrical safety regulations. Refer to the appropriate documentation for detailed information.
- The device should be used in the environment within temperature range from -10 °C to 50 °C (14 °F to 122 °F), humidity ≤90%, and height ≤5000 m.
- The input voltage should conform to the IEC61010-1 standard: SELV (Safety Extra Low Voltage) and the Limited Power Source ((5 V DC/0.3 A).
- Make sure the plug is properly connected to the power socket.
- If smoke, odor, or noise arises from the device, immediately turn off the power, unplug the power cable, and contact the service center.
- The installer and user are responsible for password and security configuration and its settings.



### Cautions

- Do not drop the device or subject it to physical shock.
- Wipe the device gently with a clean cloth and a small quantity of ethanol, if necessary.
- 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 expose the device to high electromagnetic radiation or extremely hot, cold, dusty, or damp environments.
- Place the device in a dry and well-ventilated environment.

- Keep non-waterproof devices away from liquids.
- Keep the device in original or similar packaging while transporting it.
- A few device components (e.g., electrolytic capacitor) require regular replacement. The average lifespan varies, so periodic checking is recommended.

Contact your dealer for details.

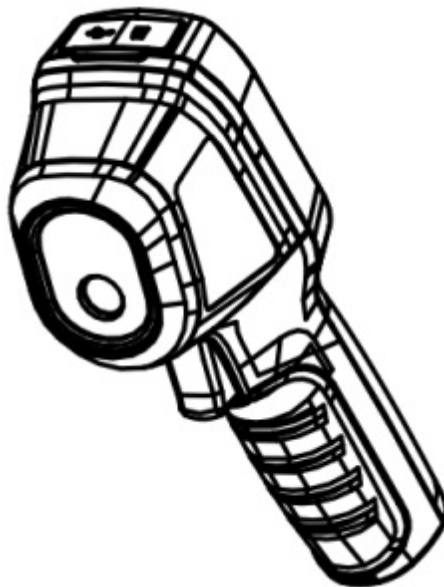
- Never attempt to disassemble the device.
- Improper use or replacement of the battery may result in explosion hazards. Replace with the same or equivalent type only. Dispose of used batteries in conformance with the instructions provided by the battery manufacturer.
- The built-in battery cannot be dismantled. Please contact the manufacture for repair if necessary. The battery type is E097-27-1P1S18650, and the rated voltage and capacity are 3.6 VDC/3.35 Ah (12.06 Wh).
- The battery may explode if it is replaced by an incorrect type. Dispose of used batteries according to the instructions.
- For long-term storage of the battery, make sure you fully charge it every half year, to ensure the battery quality. Otherwise, you may damage the battery.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

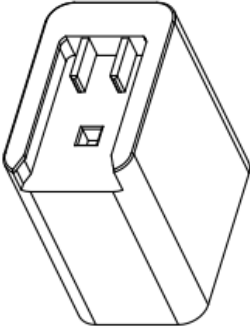

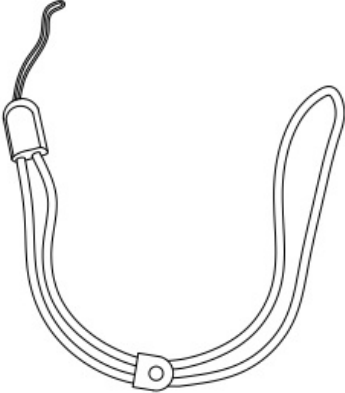
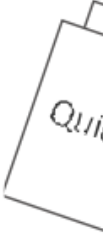
## **SAVE THIS MANUAL FOR FUTURE REFERENCE**

### **Introduction**

#### **1.1 Box Content**



**Thermographic Handheld Camera (×1)**

	
<b>Power Adapter (x1)</b>	
	
<b>Wrist Strap (x1)</b>	

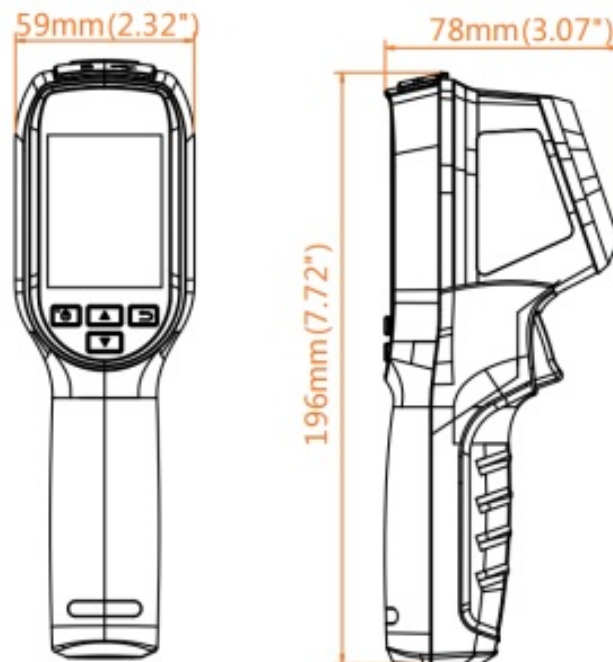
**Note:** The Handheld Thermography Camera includes one battery and one micro SD card.

## 1.2 Product Introduction

The handheld Thermography camera is a camera with thermal images. It can do thermometry, and snapshot capturing. The built-in high-sensitivity IR detector and high-performance sensor detect the temperature change and measure the real-time temperature. The temperature measurement range is -20°C to 550 °C (-4 °F to 1022 °F) with thermometry accuracy  $\pm 2$  °C. It helps the users to find the risky part and lower their property loss. The device supports live viewing and capturing, etc. The handheld Thermography camera, adopting an ergonomic design, is easy to use.

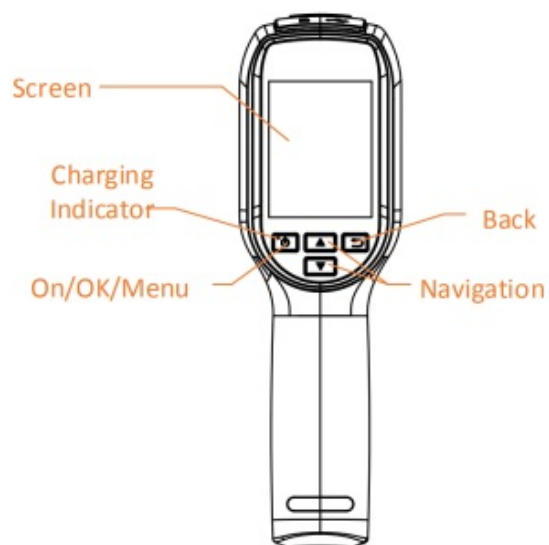
## Appearance






### 2.1 Dimensions



The dimension may vary according to different camera models.

## 2.2 Interfaces



	Hold: Power On/Off Press: Display menu or confirm the operation
	Exit the menu or return to the previous menu.
 	Navigation Button Press the ▽, △button to select parameters. Press the  button



Charging Indicator	When the device is charging, the LED indicator is red. When the device is fully charged, the LED indicator is green.
USB Interface	Charge the battery and export snapshots with the USB cable.
Trigger	Pull the trigger to capture snapshots.

## 2.3 Install Memory Card

Insert the memory card to record videos, capture snapshots, and mark and save important data.

### Steps:

1. Open the top cover of the device.
2. Insert memory card slowly into the micro SD slot. When you hear the click sound, the memory card is installed.
3. Close the cover after installation.

## Basic Operations

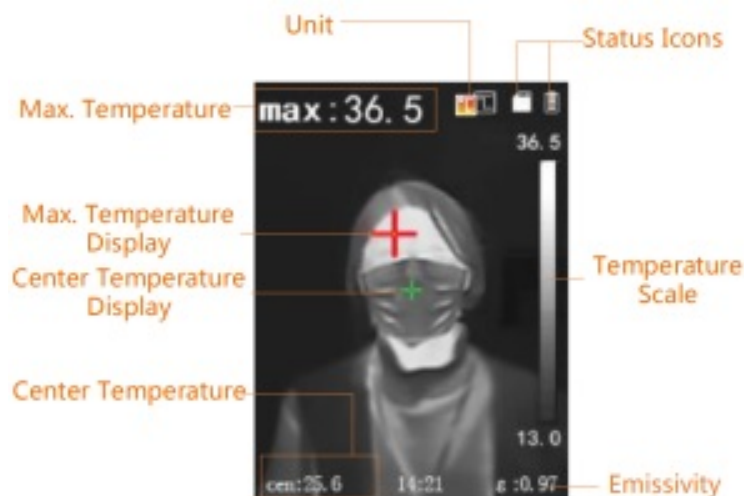
### 3.1 Charging the Device

#### Steps:

1. Open the top cover of the device.
2. Connect the USB interface and the power adaptor with a USB cable.







### 3.2 Interface Description



### 3.3 Format Micro SD Card

**Before you start:** Confirm the Micro SD card is properly installed before use.

#### Steps:



4. In the live view interface, press  the button to show the menu bar.
5. Press  /  button to select Format Micro SD.
6. Press  the button and select OK to start format Micro SD Card.

**Note:** Format Micro SD Card before the first use of it.



### 3.4 Capture Snapshots





#### Steps:

1. In the live view interface, pull the trigger to capture snapshots. The live view freezes and the device display the snapshot with temperature information.
2. Press  the button to save the picture, press  the button to cancel it.

**Note:** You cannot capture when the device is connected to a PC.

### 3.5 View Snapshots

#### Steps:

1. Go to Menu > Picture to view the capture snapshots.
2. Press  the button to view the selected picture, press  /  button to switch pictures.
3. (Optional) Press  the button to delete a picture in picture view interface.

### 3.6 Export File

#### Purpose:

Connect the handheld Thermography camera to your PC with a USB cable, you can export the captured snapshots.

#### Steps:

1. Open the USB cover.
2. Connect the camera to your PC with a USB cable and open the detected disk.
3. Select and copy the snapshots to PC and view the files.
4. Disconnect the device from your PC.

#### Note:

For the first-time connection, the driver will be installed automatically. Do not disconnect the USB connection from the PC or pull out the Micro SD card during drive installation or it may cause device damage.

### 3.7 Upgrade

#### Steps:

1. Connect the thermography camera to your PC with a USB cable and open the detected disk.
2. Copy the upgrade file and replace it with 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 reboots. You can view the current version in **Menu > About**.

### Main Configurations



## 4.1 Temperature Measurement


### Purpose:

The thermometry (temperature measurement) function provides the real-time temperature of the scene and displays it on the left of your screen. The thermometry function is turned on by default. The thermometry parameters affect the accuracy of temperature measurement.

### Steps:

1. In the live view interface, press  the button that shows the menu bar.

2. Press  /  button to select desired setting bar.

3. Press  the button to go to the setting interface.

- Emissivity: Set the emissivity of your target as the effectiveness in emitting energy as thermal radiation.





**Note:** Refer to the 6.1 Common Material Emissivity Reference for emissivity values.

- Distance (m/feet): Set the straight-line distance between the target and the device.

**Note:** The recommended thermometry distance is 0.2 m to 2 m with a target size of 80 × 80 mm.

- Rule: Select Hot Spot, Cold Spot to show the center temperature, min. the temperature in the live view interface.

4. Press  /  button to select the desired parameter, and press  the button to enable it.

5. If necessary, press  /  button to increase/decrease the setting values. Hold  /  button to change the value quickly.

6. Press  the button to save and exit.


## 4.2 Set Palette

Different palette modes display different temperature colors. You can analyze images by different palette colors.

### Steps:

1. In the live view interface, press  the button to show the menu bar.

2. Press  /  button to select Palette.

3. Press  the button to select palette mode and the live view interface displays the according to palette color.



4. Press  the button to save and exit.




## 4.3 Set Temperature Alarm

After enabling this function, when the device detects a temperature that is higher than the set alarm threshold, Max. The temperature on the live view interface will flash.

### Steps:

1 In the live view interface, press  the button to show the menu bar.

2 Press  /  button to select Temperature Alarm.

3 Press  , and press  /  button to increase or decrease alarm temperature threshold.

4 Press  the button to exit.

**Note:** If the palette is set as Above Alarm when the detected temperature is higher than the set alarm temperature, the target is colored in the live view interface.

**Note:** Other parameters, such as temperature measurement range, unit, palettes, and so on, can be configured as steps above.

## System Information

Go to Menu > About to view the device information: Model, Version No., FPGA Version No., Serial No., Capacity, and so on. You can also set the auto power-off duration, date, and time in Menu.

## Appendix

### 6.1 Common Material Emissivity Reference

Material	Emissivity
Human Skin	0.98
PCB	0.91
Cement Concrete	0.95
Ceramics	0.92
Rubber	0.95
Paint	0.93
Wood	0.85
Asphalt	0.96
Brick	0.95
Sand	0.9
Soil	0.92
Cotton	0.98
Cardboard	0.9
White Paper	0.9
Water	0.96

### 6.2 Frequently Asked Questions (FAQ)

**Q: The charge indicator flashes red.**

**A: Examine the items below.**

1. Examine whether the device is charged with the standard power adapter.
2. Plug and unplug the battery once.
3. Make sure the environment temperature is above 0°C (32°F).

**Q: Capturing or recording fails.**


**A: Examine the items below:**

1. Whether the device is connected to your PC and the capture function is unavailable.
2. Whether the storage space is full.
3. Whether the device is low-battery.

**Q: The PC cannot identify the camera.**


**A: Examine whether the device is connected to your PC with a standard USB cable.**

**Q: The camera cannot be operated or not respond.**

A: Hold  button to reboot the camera.

**UD18508N**

## **Documents / Resources**

	<p><a href="#">HIKVISION UD18508N Thermographic Handheld Camera</a> [pdf] User Manual UD18508N, Thermographic Handheld Camera</p>
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