



# USER MANUAL

## INFRARED THERMAL IMAGING CAMERA

Hand-held observation thermal imaging device  
with INFRAROT-SENSOR CE-Series





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## DOWNLOAD APP

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Search for 'Hdaniee' in the APP store or scan the QR code to download the APP.



Images may differ from the original.

## HAND STRAP






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Thread the thin end of the hand strap through the slot provided and then pull the thicker end through the loop.

# SAFETY INSTRUCTIONS

## ICON CONVENTIONS

The symbols used in this document are defined in the following way.

Icon	Description
 <b>Danger</b>	Indicates a dangerous situation which, if not avoided, will or could result in death or serious injury.
 <b>Attention</b>	Indicates a potentially dangerous situation which, if not avoided, may lead to device damage, data loss, performance degradation or unexpected results.
 <b>Notice</b>	Provides additional information to emphasise or supplement important points in the main text.



**Danger**



### TO THIS MANUAL

This User Manual is to be regarded as part of the appliance. Read the safety instructions and operating instructions carefully before using the appliance.

Keep these operating instructions in a safe place for future reference. If the appliance

is sold or passed on, the operating instructions must be passed on to any subsequent owner/user of the product.

## GENERAL SAFETY INSTRUCTIONS

This appliance is suitable for children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. It is important that children do not play with the appliance.

Cleaning and maintenance of the appliance should not be carried out by children without supervision. Children under the age of 3 should be kept away unless they are continuously supervised.



### DANGER OF SUFFOCATION!

Keep packaging materials (plastic bags, rubber bands, etc.) away from children; there is a risk of suffocation!



### DANGER OF ELECTRIC SHOCK!

This appliance contains electronic components that are charged via a power source (mains adapter). Children may only use the appliance under adult supervision.

It may only be used as described in the instructions, otherwise there is a risk of electric shock.

Disconnect the power supply when you are not using the device by unplugging the USB mains adapter. This also applies in the

event of a prolonged interruption to operation, as well as before all maintenance and cleaning work.

The device may only be disconnected from the power supply by unplugging the USB power adapter. Never pull on the cable!



### **DANGER OF FIRE/EXPLOSION!**

Do not expose the device to high temperatures. Only use the mains adapter supplied. Do not short-circuit the device! Excessive heat and improper handling can cause short circuits, fires and even explosions.



### **NOTICE!**

Do not dismantle the appliance! In the event of a defect, contact the service centre responsible for your country.

Do not immerse the device in water! Do not expose the device to shocks, vibrations, dust, permanently high temperatures or extreme humidity. This can lead to malfunctions, short circuits and damage to batteries and components.

During operation of the device, a soft clicking sound can be heard every few seconds. This is quite normal and means that the object is capturing the image.



### **ATTENTION**

- Do not drop any objects on the device and do not expose it to strong vibrations or magnetic interference.
- Do not place the device where it will be exposed to vibrations or shocks, otherwise it may be damaged.

- Do not use the device in an extremely hot, extremely cold, dusty, corrosive, very salty or humid environment. Please refer to the table with the product parameters for the temperature and humidity requirements.
- The charging environment of the device battery must be 0°C ~ 45°C, otherwise the charging function will be switched off automatically.
- Do not point the lens at strong light sources, such as the sun, light bulbs or other high temperature targets. This can damage the lens or the thermal imaging detector.
- The equipment must be stored in a dry and corrosion-free environment.
- Do not store the device in places where it is exposed to direct sunlight, poorly ventilated or near heat sources (e.g. radiators or fan heaters). Otherwise there is a risk of fire.
- Appliances that are stored for long periods of time should be switched on for inspection every six months. The switch-on time should not be less than three hours.
- **Cleaning:** To clean the lens gently, you should proceed carefully to avoid scratches or damage.
  - **Remove dust:** Use a bellows or compressed air spray to gently blow loose dust and dirt off the lens. Avoid blowing directly, as the breath can bring moisture and particles onto the lens. If dust is still present, use a soft lens brush to remove any remaining particles. Make sure the brush is clean and dust-free.
  - **Use microfibre cloth:** A special microfibre cloth for lenses is ideal for removing fingerprints or dirt. Make sure that the cloth is clean to avoid scratches.

- **Lens cleaner:** If necessary, a special lens cleaner can be used. Apply the cleaner to the microfibre cloth (not directly to the lens) and then clean the lens in gentle, circular movements from the inside to the outside.
- **Avoid cleaning solutions:** Avoid household cleaners or glass cleaners, as these contain aggressive chemicals that could damage the lens coating, which can cause damage to the lens.
- If you connect the Product to the Internet, you do so at your own risk, including but not limited to the possibility that the Product may become a victim of network attacks, hacker attacks, virus infections, etc. The Company shall not be liable for any malfunction of the Product that results in the disclosure of information or other problems.
- Network security problems may occur when accessing the Internet. Please strengthen the protection of personal information and data security. If you notice that the device harbours potential network security risks, please contact us in good time.
- Please keep all original packaging materials of the appliance in a safe place so that you can pack the appliance with packaging material and send it to the service centre for treatment in the event of a problem. The company accepts no responsibility for accidental transport damage caused by unsuitable packaging material.

## INTRODUCTION

### Congratulations!

To purchase our infrared thermal imaging camera, which has been specially developed for hunting, rescue, night patrol and police operations.

This powerful device allows you to accurately and reliably detect heat sources even in complete darkness, fog or difficult weather conditions. This makes it an indispensable tool for a wide range of outdoor and security applications.

The thermal imaging camera enables you to quickly and efficiently localise animals and people in dense forests, confusing terrain or in poor visibility conditions. It helps you to monitor your surroundings safely and thus increases your effectiveness when carrying out your tasks.

It also has a photo function.

This facilitates the simultaneous observation of several objects and opens up further application possibilities. Connect the device to a computer via a USB cable to browse the images you have already captured.

Please always observe the right to your own image.

These instructions will guide you through the most important steps for setting up, operating and maintaining the camera so that you are well prepared for any situation. We recommend that you familiarise yourself with the functions and setting options in order to make optimum use of the device.

**We wish you every success in your work with our infrared thermal imaging camera!**



## SCOPE OF SUPPLY

- **Thermal imaging camera**
- **USB cable (Type-C)**
- **Storage bag**
- **wrist loop**
- **User manual**

## BATTERY CHARGING INSTRUCTIONS

### Use the USB data cable for charging:

This device has an integrated, rechargeable battery. If the battery is low, please charge it in good time via the Type-C port.

When the battery is fully charged, disconnect the USB cable.

**Note:** If the battery is fully discharged, malfunctions will occur. It is therefore recommended that the battery is only used when it is sufficiently charged.

### 1.1 PRODUCT DESCRIPTION

The portable monocular thermal imaging camera is a portable device with functions for observation, target tracking at maximum temperature, distance measurement, etc.

The high-sensitivity, built-in heat detector provides you with a clear view even in complete darkness. The device is mainly used for outdoor scenarios such as hunting, search and rescue, hiking and travelling.

### 1.2 MOST IMPORTANT FEATURES

- High-performance processing chip and technology used to improve image detail.
- Supports OLED display with a resolution

of 1024 × 768 - Built-in rechargeable lithium battery that lasts up to 7 hours after charging.

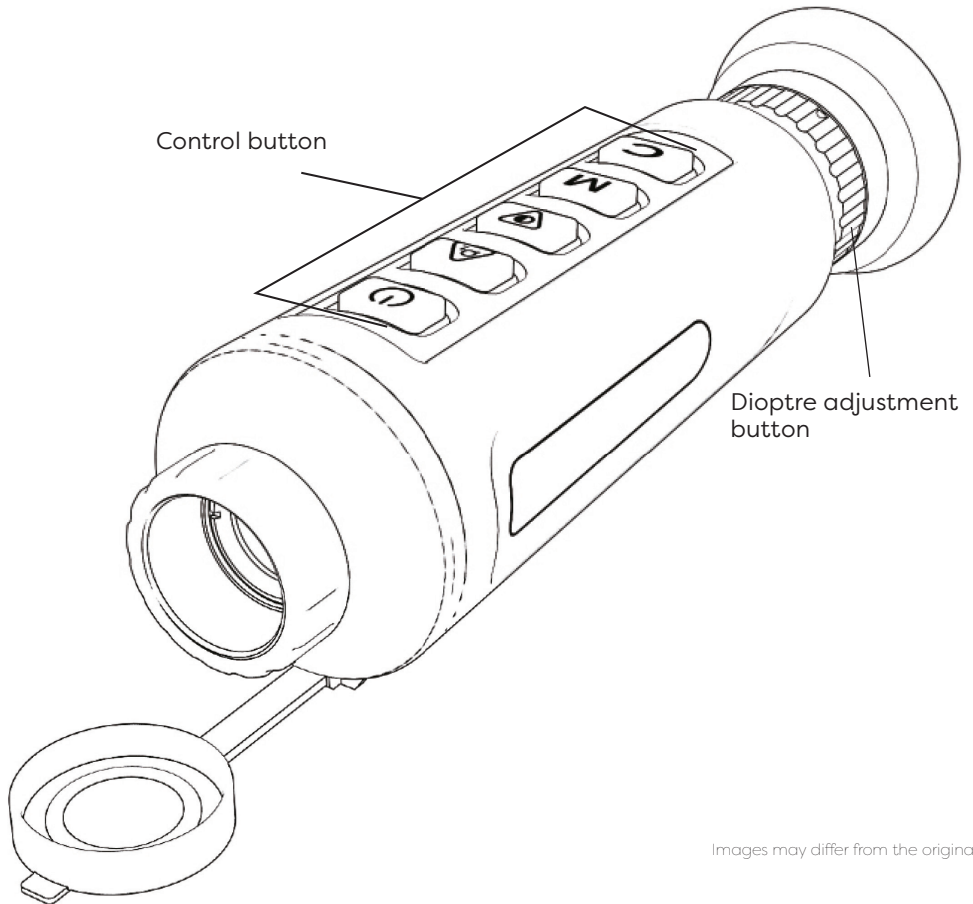
- Equipped with USB charging cable for charging.
- Small and exquisite, easy to carry.

### 1.3 MAIN FUNCTIONS

- **Hot spot tracking**  
Recognise and mark the highest temperature in the scene.
- **Network function**  
Support hotspots, add the thermal imaging camera via the APP of your mobile phone and realise functions such as detection, recording and parameter configuration.
- **Storage capacity**  
Built-in memory (up to 16GB), supports recording and screen capture.
- **Digital Zoom**  
Support 1X, 2X, 4X, 8X

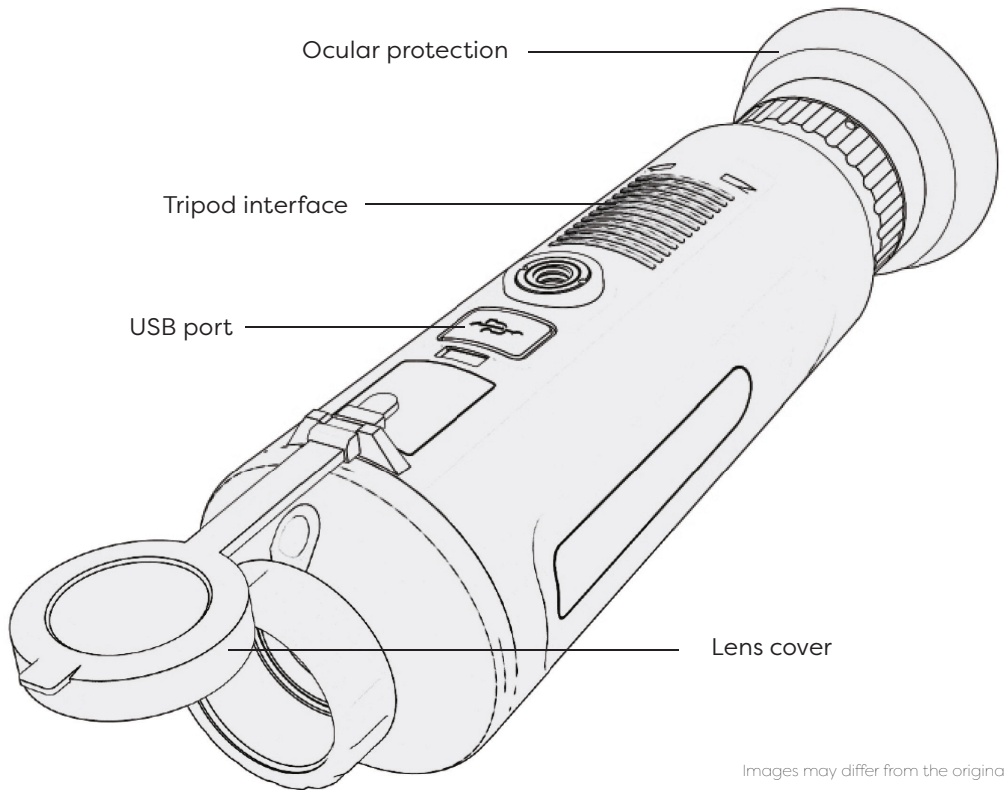
# CONTROLS AND PORTS

## FRONT OF THE THERMAL MONOCULAR



Images may differ from the original.

## BACK OF THE THERMAL MONOCULAR



Images may differ from the original.

### Lens cover:

Protection against dust. Please do not forget to cover the lens after use.

### Operating indicator:

The indicator lights up when the appliance is in operation.

### Dioptre adjustment wheel:

Allows the user to adjust the viewfinder to the individual visual

acuity. By turning the control dial, you can adjust the focus of the viewfinder so that the image on the display appears sharp and clear.

### USB connection:

Used to charge the integrated battery. Connect the camera using the USB cable supplied.

To ensure optimum charging speed and a long battery life, only use recommended accessories!

# PREPARATION

Make sure that the scope of delivery of the camera is complete.

Check that the camera, USB cable and any accessories such as a carrying strap or storage bag are included.

## Charging the battery

After switching on the thermal imaging camera, the battery level is displayed in the top right-hand corner of the screen.

If a reminder of the remaining power is displayed on the screen, this means that the device's battery is low.

Please charge it in good time to prevent it from switching off during use.

## Application steps

1. Use the USB port on the back of the device to charge it.
2. Connect the USB charging cable to the USB port on the device to charge it.

## Notice

- The charging environment for the thermal imaging camera battery must be 0°C ~ 45 °C, otherwise the charging function will be switched off automatically.
- Please use the standard USB charging cable to charge the thermal imaging camera.

## Checking and cleaning the lens

Check that the lens is clean and free from dirt or fingerprints.

If necessary, use a soft cloth to carefully clean the lens.

A clean lens guarantees optimum image quality.

## Check software update

Check whether the latest software or firmware updates are available for your camera.

Update the camera if necessary to ensure that all functions are working properly.

## Check weather conditions

Before using the camera outdoors, check the weather conditions.

Extreme temperatures, rain or high humidity can affect the performance of the camera.

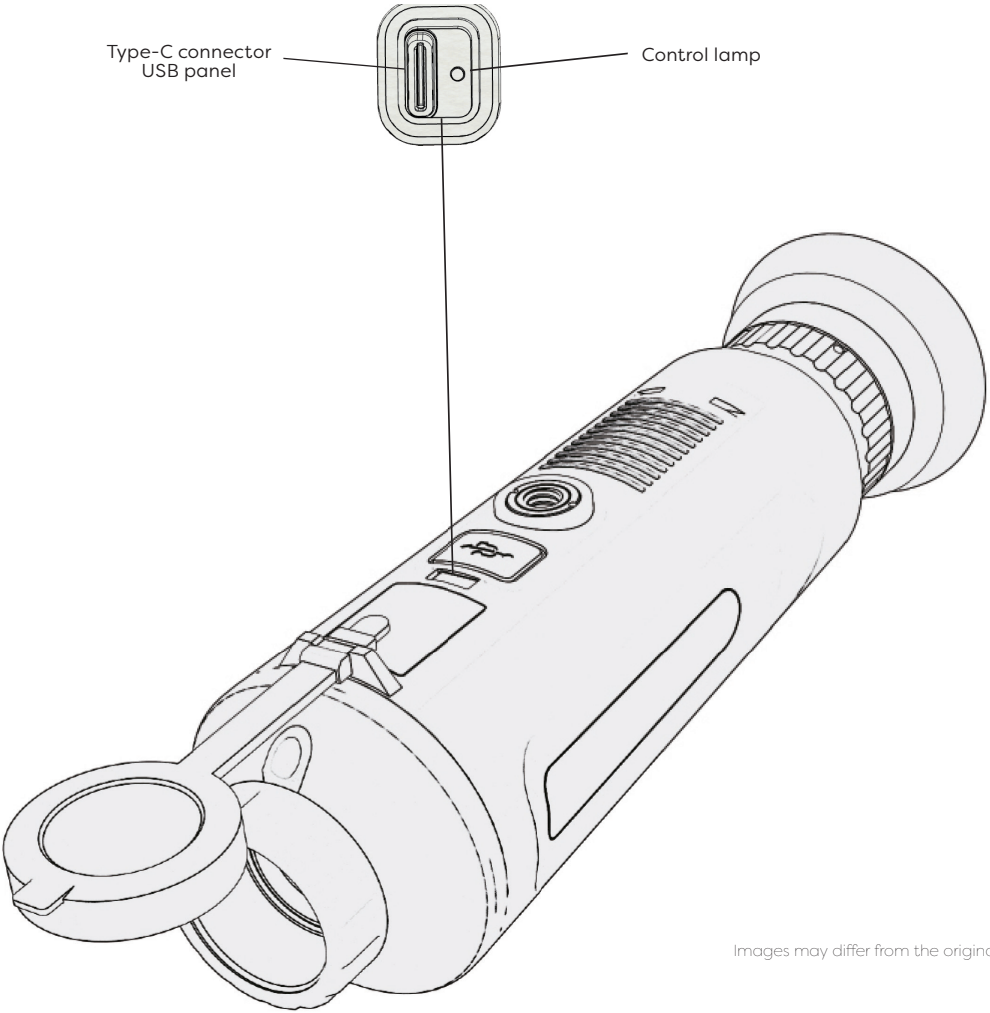
If necessary, use a protective cover or check the IP protection class of the camera.

## Get to know the controls and functions

Read through the operating instructions and familiarise yourself with the most important functions of the camera.

Make sure you know how to switch on the device, change modes and take pictures.

Once these preparations have been completed, you can use the infrared thermal imaging camera safely and efficiently.



## IMAGE ADJUSTMENT

In order to obtain precise and clear thermal images with an infrared thermal imaging camera, correct visual adjustment is required. Several parameters can be set here:

### SET THE IMAGE FOCUS

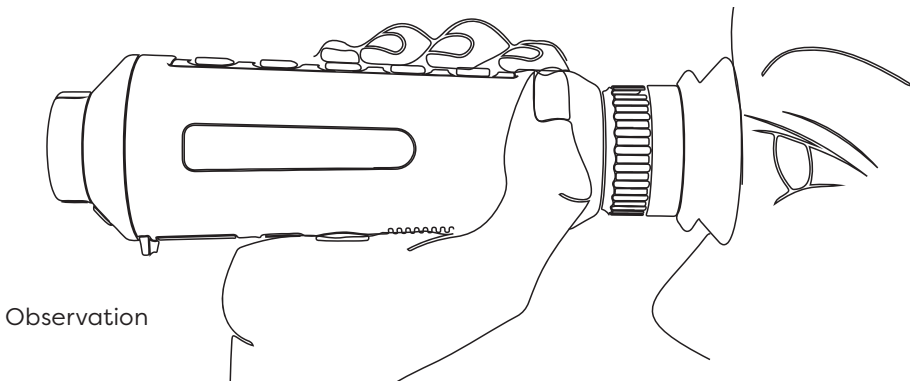
A sharp image display is only possible if the image is correctly focussed.

The focus can be adjusted manually by turning the dioptre adjustment wheel.

A sharp image enables more accurate temperature measurements and better visual evaluation.

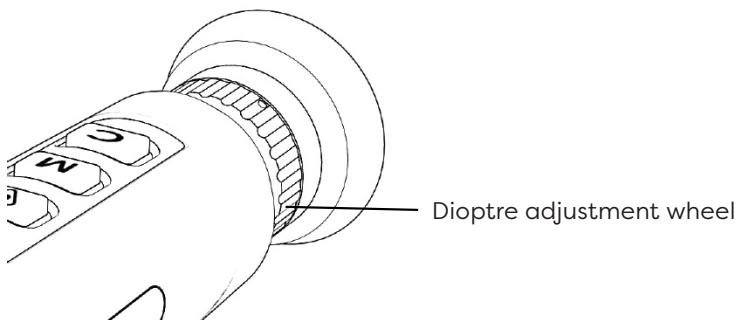
### Steps:

1. Point the lens of the thermal imaging camera at the scene to be observed.
2. Turn the dioptre adjustment wheel clockwise or anti-clockwise to focus the image.



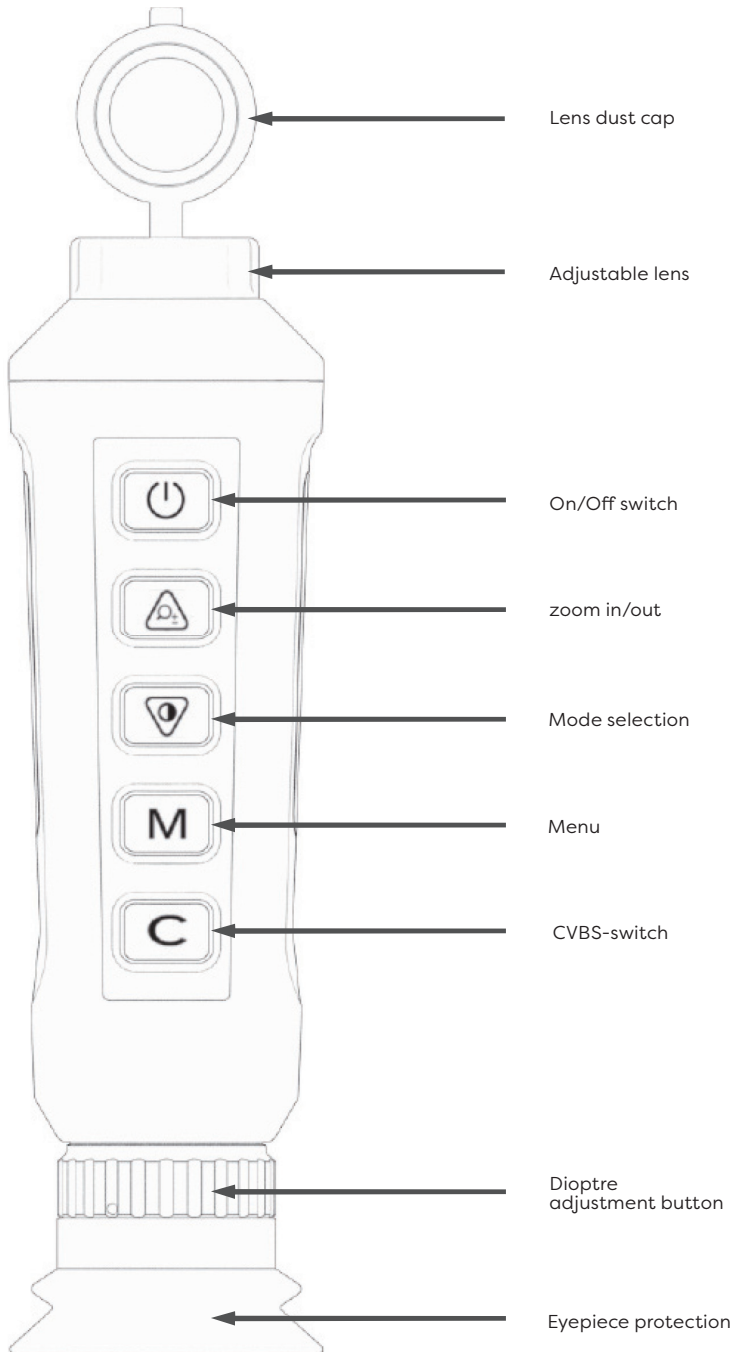
### DANGER

Please do not touch the lens surface when focusing manually to avoid soiling the lens.

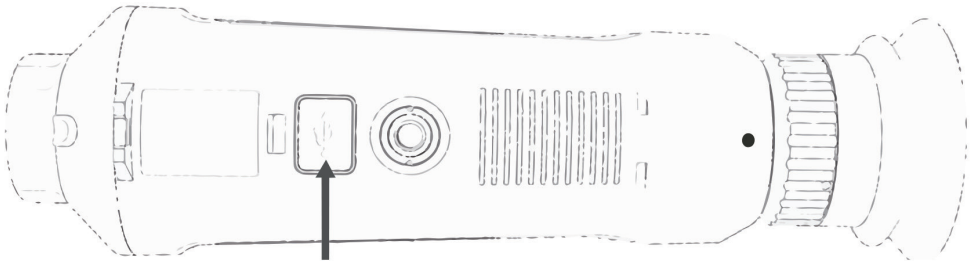


Images may differ from the original.

## PARTS OVERVIEW



Images may differ from the original.



USB-Port

Images may differ from the original.

## CHARGE

The device has a built-in rechargeable battery. If the battery charge is low, please charge it in good time via the Type-C port.


## SWITCH ON/OFF

Press and hold the [  ] button to switch the device on or off.

## PHOTO SHOT

Press the button [  ] for 3 seconds to take a picture. The [  ] is displayed on the screen to confirm that a picture has been taken.

## VIDEO RECORDING

Press and hold [  ], to start video recording and the recording time will be displayed on the screen.


## EXPORT PICTURES

Recorded and saved images can be viewed and exported via a Type-C connection to a computer.

## SWITCH MODE

Press the button [  ], to switch between the six picture modes: **WHITE HOT, BLACK HOT, FUSION, RED HOT, BIRD-WATCHING MODE** and **SKY PATTERN**.

## ZOOM IN/OUT

With the device switched on, press the button [  ]. Each time the button is pressed, the target is gradually magnified by a factor of 2 or 4 and displayed.

Press the button again to return to normal magnification..

## ADJUST DIOPTRIC VALUE

Turn the diopter adjustment wheel to the left or right to adjust the diopter value to your individual needs.

## FOCUSABLE OBJECTIVE

Turn the lens mount to the left and right to focus. Turning clockwise focuses at close range, turning anti-clockwise focuses at long range.



## USE OF DIFFERENT COLOUR PALETTES

The colour palette menu allows you to change the pseudo colours in the infrared thermal image.

Six different colour palettes are available: **WHITE HOT / BLACK HOT / FUSION / RED HOT / BIRD-WATCHING / SKY PATTERN.**

By selecting the correct colour palette, details of the target object can be better displayed.

**FUSION** and **RED HOT** focus on the colour display. They are very suitable for conditions with strong thermal contrast and are used to improve the colour contrast between high and low temperatures.

In contrast, the **WHITE HOT** and **BLACK HOT** colour palettes provide a greyscale image.

**WHITE HOT** is particularly suitable for monitoring from a greater distance.

The effect of the six different colour combinations is as follows:

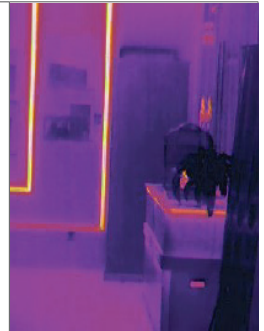
### BLACK HOT

Indicates that objects with a high temperature in the scene are displayed in black. The higher the temperature, the darker the colour in the image



### FUSION

Indicates that the temperature of the object in the scene changes from high to low and the image changes from white ->yellow ->red ->pink ->violet.



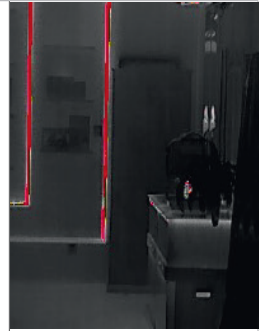
### WHITE HOT

Indicates that objects with a high temperature in the scene are displayed in white. The higher the temperature, the whiter the colour in the image.



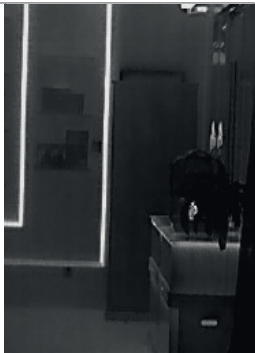
### RED HOT

Indicates that objects with a high temperature are displayed in red in the scene. The higher the temperature, the brighter the colour in the image.



## BIRD-WATCHING

Offers optimum visibility with low temperature differences. With the **white hot** mode, even small differences are amplified so that animals or moving objects are easily recognisable.



## SKY PATTERN


**White hot** mode reduces background noise and emphasises the heat source.



## WIFI FUNCTION & APP DOWNLOAD

First install the corresponding app on your smartphone.

Go to the menu to activate the Wi-Fi function.

Select [  ], start the WLAN search on your smartphone, activate the connection 'CENV-\*\*\*\*\*' and establish a connection.

Enter the password: '12345678'.

Now open the application.

Press Start to establish the connection to the camera.

## VIDEO OUTPUT

Connect an external screen via the USB socket of the video output and switch on the device.




To start the video output function (CVBS), press and hold the [C] button for 3 seconds. The screen now switches to the display of the external monitor.

Press and hold the button again for 3 seconds to exit the mode.

## MENU

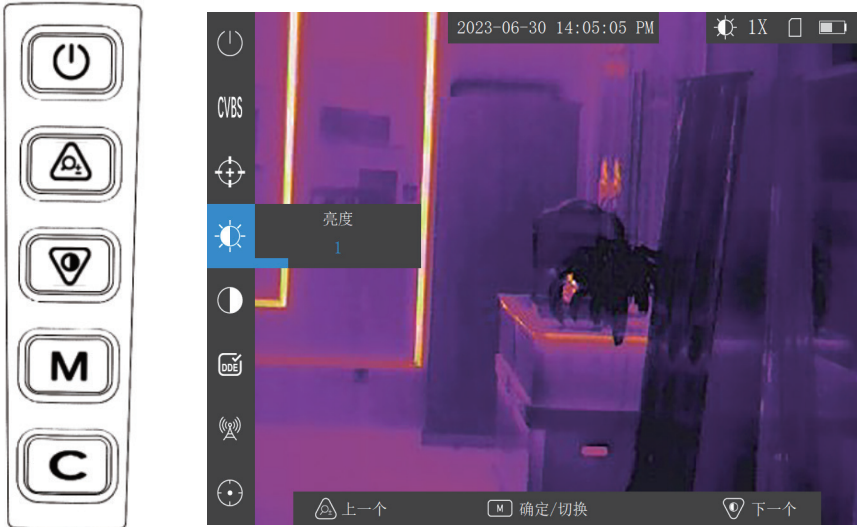
Press the [M] button for 3 seconds to open the menu.



Press and hold the button again for 3 seconds to exit the menu.

Button	Description
	Long press: Switch on/off
	Short press: Doubling of the number  Long press: Capture the image
	Short press: Change pseudo colour  Long press: Video recording
<b>M</b>	Short keystroke: Flat field correction  Long keystroke: Enter/Exit menu
<b>C</b>	Long press: Switch CVBS  Composite video, also known as composite video baseband signal (CVBS), is an analogue video transmission signal (without sound) that transmits information in a standard resolution of 480 i or 576 i to an external screen (480 lines or 576 lines with braid).

## MENU INSTRUCTIONS

Press and hold the **M** button in the main preview to call up the main menu.



- Press  to scroll up
- Press  to scroll down
- Press **M** to confirm, or hold to exit

## TECHNICAL DATA

CE Series		CE-635	CE-650
<b>Lens</b>			
Focal Length		35 mm	50 mm
Field of vision	Detection	3500 m	5000 m
	Identification	875 m	1250 m
<b>Detector</b>			
Detector type		Uncooled VOx-Detector	
Frequency range		8 ~ 14 µm	
Resolution, pixel pitch		640 x 512 px, 12 µm	
Field of vision (H x V)		12.6° x 10.1°	8.8° x 7°
Noise equivalent temperature difference (NETD)		<30 mK @ 25°C, F#1.0	
Frame rate of the detector		≤ 50 fps	
<b>Display</b>			
Screen		0.39" OLED, 1024 x 768 px, 50 Hz	
Brightness / Contrast		5 Einstellungsstufen	
Digital zoom		1x, 2x, 4x, 8x	
Hotspot tracking		Available	
Colour palette		Black hot, White hot, Red hot, Fusion, Bird watching, sky	
<b>Functions</b>			
Hotspot network		Available	
Screen recording / screenshot		Available	
CVBS-Ausgang		Available	
<b>Power supply</b>			
External power supply		Type-C, 5V-2A	
Power		0.85 W (CVBS output off)	
Battery type / operating time		Rechargeable lithium battery, ≥8h	
<b>Other features</b>			
Memory		Integrated memory module (32GB)	
Protection class		IP67	
Dimensions / Weight		58 x 62 x 225 mm / 450 g	

# DISPOSAL

## NOTE ACCORDING TO THE ELECTRICAL AND ELECTRONIC EQUIPMENT ACT

### Disposal of electrical and electronic appliances



The symbol of the 'crossed-out dustbin' means that you are legally obliged to dispose of these appliances separately from unsorted municipal waste. Disposal via household waste, such as the residual waste bin or the yellow bin, is prohibited. Avoid incorrect disposal by disposing of waste correctly at special collection and return points. Waste prevention measures always take precedence over waste management measures. Waste prevention measures for electrical and electronic appliances include, in particular, extending their service life by repairing defective appliances and selling functional used appliances instead of disposing of them.

### Options for returning old appliances.

Owners of old appliances can return them free of charge within the framework of the options for the return or collection of old appliances set up and available by public waste disposal organisations. In addition, under certain conditions, it is also possible to return them to distributors.

The return by the distributor must be free of charge when a new appliance of the same type is purchased (1:1 return). In addition, old appliances can be returned to the distributor free of charge if the external dimensions do not exceed 25 centimetres and the return is limited to three old appliances per appliance type (0:1 take-back).

**Retail:** Distributors with a sales area for electrical and electronic equipment of at least 400 square metres are obliged to take back waste electrical equipment. Food retailers with a total sales area of at least 800 square metres and who also sell electrical and electronic equipment several times a calendar year or on a permanent basis and make it available on the market are also obliged to take it back.

**Distance selling market:** Distributors who sell their products using means of distance communication are obliged to take back old appliances if the storage and dispatch area for electrical and electronic appliances is at least 400 square metres.

### Removal of batteries and lamps

If the products contain batteries and rechargeable batteries or lamps that can be removed from the old appliance without causing damage, these must be removed before disposal and disposed of separately as batteries or lamps.

## NOTE ACCORDING TO BATTERY LAW



The 'crossed-out wheeled bin' symbol on batteries or accumulators indicates that they must not be disposed of with household waste at the end of their service life. If batteries or accumulators contain mercury (Hg), cadmium (Cd) or lead (Pb), you will find the respective chemical symbol below the symbol of the crossed-out dustbin:

- Pb: Battery contains more than 0.004 per cent lead by mass
- Cd: Battery contains more than 0.002 per cent cadmium by mass
- Hg: Battery contains more than 0.0005 per cent mercury by mass

## DISPOSAL

You are legally obliged to return old batteries and accumulators after use. You can do this free of charge at points of sale or at another collection point near you. Returns to sales outlets are limited to the usual quantities for end users. You can obtain the addresses of suitable collection centres from your city or local authority.

Batteries can contain harmful substances that can damage the environment and your health if they are not stored or disposed of properly. The separate collection and recycling of old batteries and accumulators should help to avoid these negative effects on the environment and human health and return valuable raw materials such as iron, zinc, manganese or nickel to the materials cycle. Particular caution is required when handling batteries containing lithium due to the special risks involved.

Please avoid the generation of waste from old batteries as far as possible, e.g. by favouring batteries with a longer service life or rechargeable batteries. Please avoid littering public spaces by not carelessly leaving batteries or electrical and electronic equipment containing batteries lying around. Please check the possibilities of reusing a battery instead of disposing of it, for example by reconditioning or repairing the battery.

Further information on the Battery Act can also be found on the Internet at [www.batteriegesetz.de](http://www.batteriegesetz.de).

### Data privacy

We would like to point out to all end users of waste electrical and electronic equipment that you are responsible for deleting personal data on the old equipment to be disposed of.

## CE LABELLING



By affixing the CE mark to its products, the distributor declares that all legal requirements for these products are fulfilled.

Before affixing the CE mark to the product, a conformity assessment and an EU declaration of conformity must be issued.



## PRODUCER

HDANIEE(Hong Kong) Electronics Co.,Ltd  
619, Jinhuiqiu Building, langshan 2nd Rd, Nanshan Dist, Shenzhen, China

## IMPORTER

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