

# Quick Start Guide

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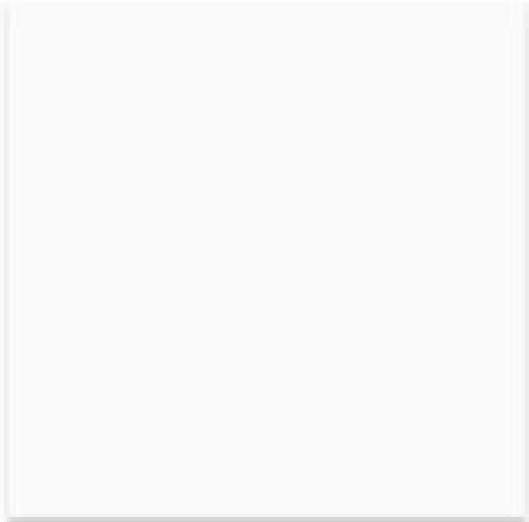



Uncooled Infrared Thermal Imager

Thank you for choosing us! To ensure you have the best user experience, we recommend reading this user manual carefully before use. If you have any questions, please feel free to contact us.

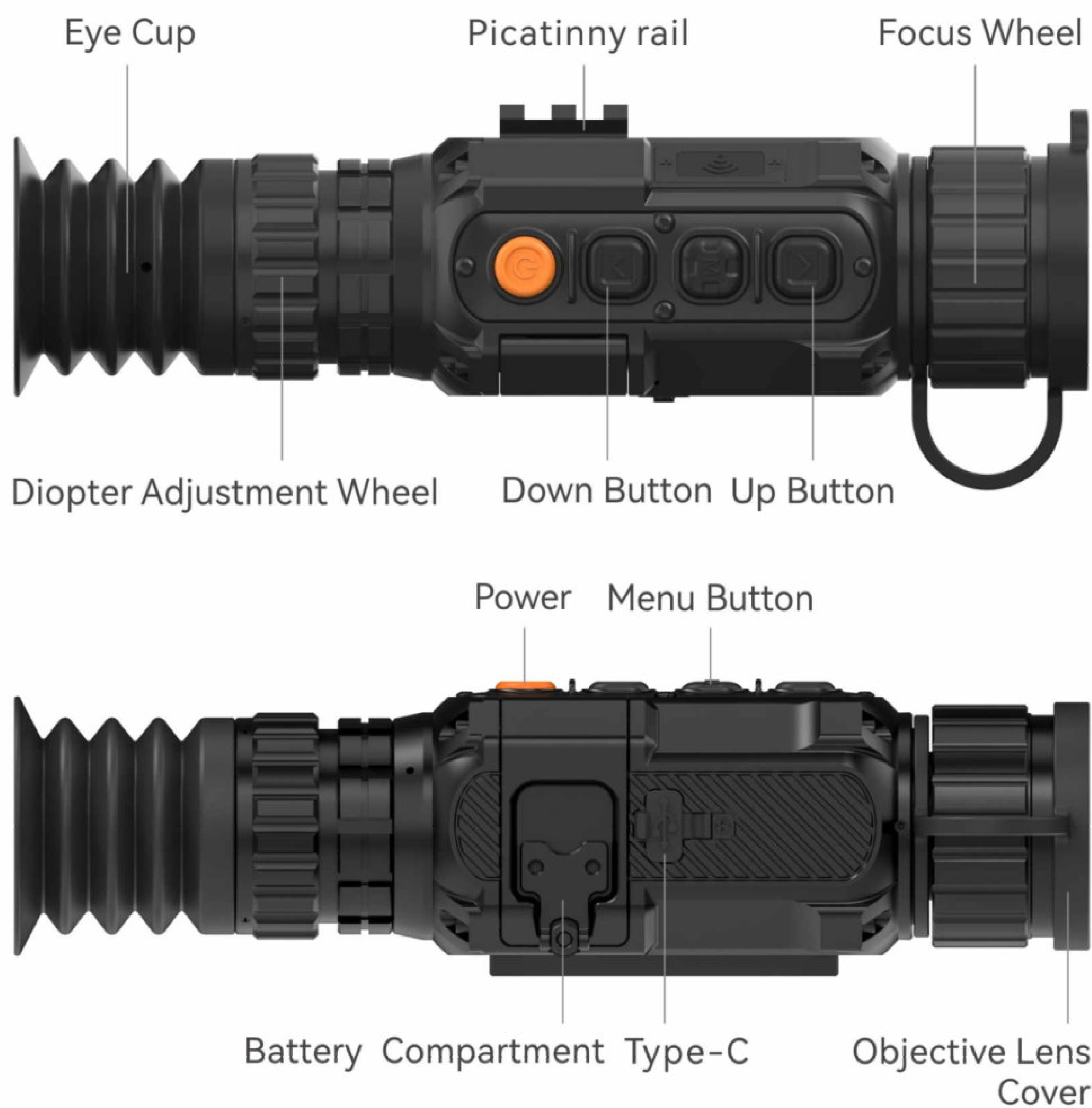
## I 01 Product Overview

This multifunctional thermal imager is an advanced infrared observation device featuring a sensitive uncooled VOx detector and a high-definition 1024x768 display. Utilizing no-shutter technology, it offers flexibility with various lens options, making it ideal for distance observation in a variety of scenarios.

## I 02 Package Contents

Package Dimensions	Total Packaged Weight
300×200×100mm	≤1000g
Main Unit	User Manual
	
Lens Cleaning Cloth	Carry Bag
	
16340 Li-ion Batteries	Installation Bracket
	

# 03 Product Appearance



- 1. Focus Wheel  
After powering on the product, align it with the observation target. If the distance to the observation target changes and the image becomes blurry, rotate the lens focus wheel to refocus until the target image is clear.
- 2. Type-C Interface  
Used for picture and video data transmission and external analog display (PAL) output. Note: The external analog output display needs to be customized by the manufacturer.
- 3. Diopter Adjustment  
Used to match the best viewing acuity of different users, with an adjust-ment range from -5 to +5.



## I 04 Joystick Operation

Button	Menu Operations	Short Press	Long Press
Up Button	Move Upwards	Capture and Save Photo	Start/ Stop Recording and Save Video File
Menu Button	Confirm Key	Pseudo-color Mode Switch	Enter/ Exit Menu
Down Button	Move Downwards	Digital Zoom	Outdoor Mode
Power Button	Power on/ Power off/ Standby	Standby/ Wake-up Mode	Power On/ Power Off

## I 05 Precautions

1. Avoid pointing the device lens directly at strong heat sources (such as the sun) under any circumstances (power on or off), as this may damage the detector focal plane.
2. When connecting user interface plugs, ensure proper alignment before insertion, and never pull or tug on the cables directly when plugging or unplugging.
3. Routine maintenance by operating personnel is limited to cable replacement or inspection, lens cover replacement, routine cleaning and maintenance, and functional checks to ensure the instrument is in good technical condition.
4. When the device is stored for long periods or not in use, it should be kept in a cool, dry environment as much as possible.
5. In case of equipment malfunction, do not dismantle the modules without authorization. Contact the manufacturer to diagnose the issue before proceeding with any repairs.
6. Do not disassemble the device by yourself to avoid damage and loss of warranty rights.

# 06 Specifications

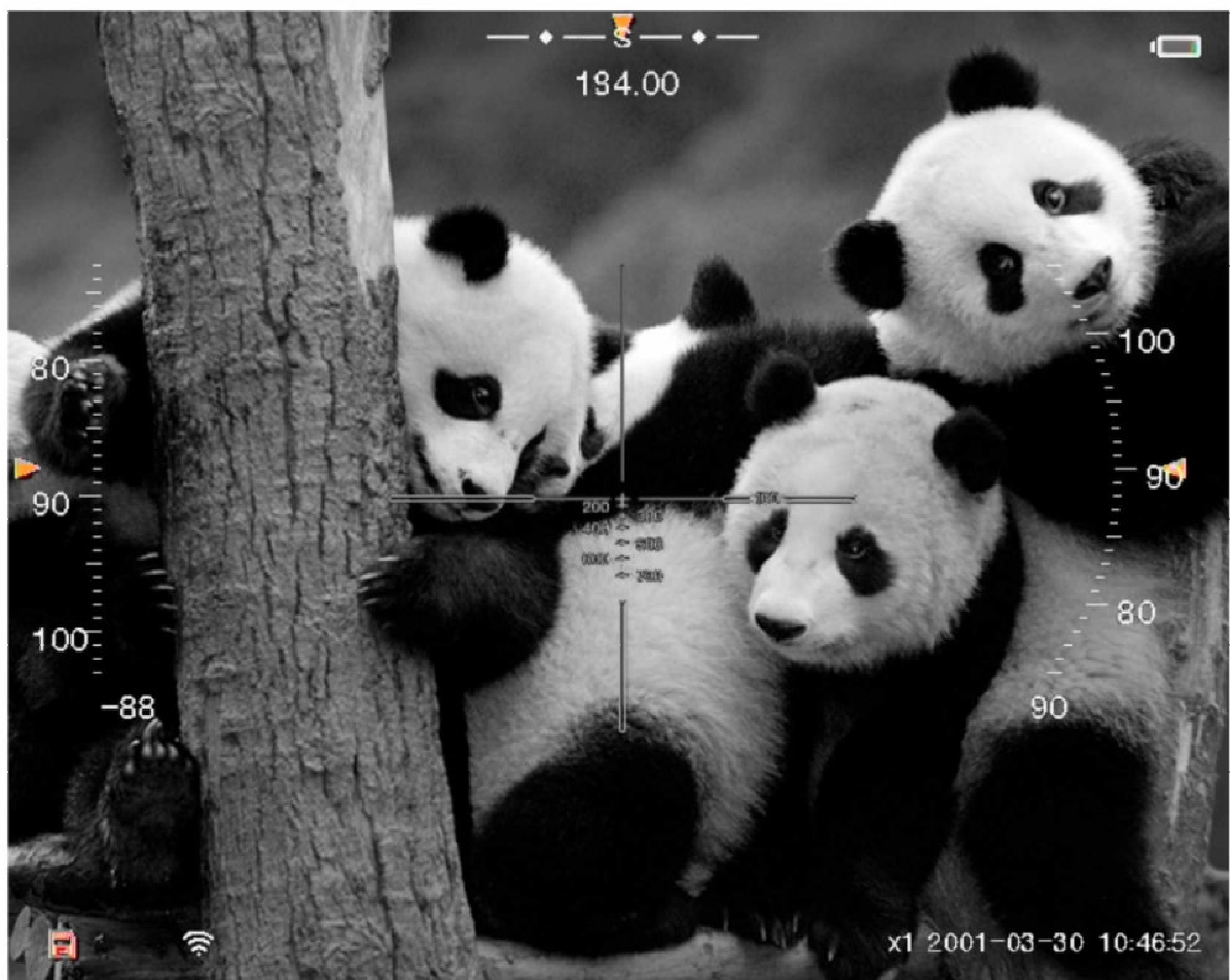
Specifications				
Model	384			640
Detector	Uncooled VOx Microbolometer			
Resolution, pixels	384×288/12μm			640×512/12μm
Objective Lens(F1.0)	19mm	25mm	35mm	25mm    35mm
Field of View	13.9°×10.4°	10.6°×7.9°	7.5°×5.7°	17.6°×14.1°    12.6°×10.1°
Visual Magnification	1.83~7.32	2.41~9.63	3.37~13.48	1.41~5.64    1.98~7.9
Spectral Band	8~14μm			
Frame Rate, Hz	50Hz			
NETD	≤50mk@300K			
Display	0.39" OLED 1024x768			
Eyepiece Diopter	-5~+5			
Eye Relief	45mm			
Power Supply	Two 16340 Li-ion Batteries			
Weight	≤500g			
Standby Time	≥2.5h			≥2h
Dimensions	208×57×58mm (Including Eyepiece/Objective Lens Caps)			
Interface	External Power/Type-C			
Operation Temperature	-30℃ ~ +50℃			
Protection Rating	IP67			
Reliability	800g Shock Resistance			
Altitude	≥5000m			
Adaptability	All-weather			
Detection Range (Human)	19mm/1800m	25mm/2370m	35mm/3310m	
Detection Range (Object)	19mm/2430m	25mm/3200m	35mm/4480m	

Note: Due to continuous product improvements and upgrades, parameters in the table may be subject to modifications without further notification.

# I 07 Menu Instructions

Name	Description	Icon
Wi-Fi	Turn on/off Wi-Fi	
Picture-in-Picture	Turn on/off Picture-in-Picture	
Hotspot Tracking	Turn on/off Hotspot Tracking	
Brightness	Brightness Adjustment	
Contrast	Contrast Adjustment	
Sharpness	Sharpness Adjustment	
Electronic Compass	Turn on/off Electronic Compass	
Attitude	Turn on/off Attitude Level, Pitch Functionality	
Compass Calibration	Calibrate Electronic Compass	
Proofreading Gun Patterns	Entering Gun Calibration Mode	
Bad Pixel Correction	Enter Bad Pixel Correction Mode	
Status Hidden	Hide Status Information	
Language	Select Menu Language	
Date/Time	System Date and Time Settings	
Video	Adjusting OLED Cool/Warm Tone	
Restore Factory Settings	Restore Parameters to Default	
Version Information	View Device Information	

## I 08 Main Interface



## I 09 User Guide

### 01 Power On

When powered on, long press the power button to start the device, and the startup screen will appear.



## **02** Power Off

When powered on, long press the power button. The system will display a shutdown prompt, and then power off.

## **03** Standby

When powered on, short press the power button to enter standby mode. In standby mode, short press the power button again to wake up the device.

## **04** Diopter Adjustment

Use the diopter adjustment wheel to adjust the eyepiece diopter to meet the astigmatism requirements of different users.

## **05** Focusing

Adjust the objective lens using the focusing wheel to observe distances from 0.5m to infinity. Rotate counter clockwise for distant focus and clockwise for near focus.

## **06** Menu

On the home screen, long press the M button to enter the menu. Short press the up/down buttons to navigate the main menu options. Short press the M button to enter the sub-menu options, and long press the M button to return to the previous menu or exit the main menu. For detailed definitions, consult the menu instructions.

## **07** Picture and Video

When powered on, press the up key shortly, and the prompt 'Image saved' appears, indicating that the photo has been successfully taken. long-press the up key to start recording a video. The status bar shows the recording time. Long press the Up button again, the prompt of "Video saved" appears, which means it is saved successfully.



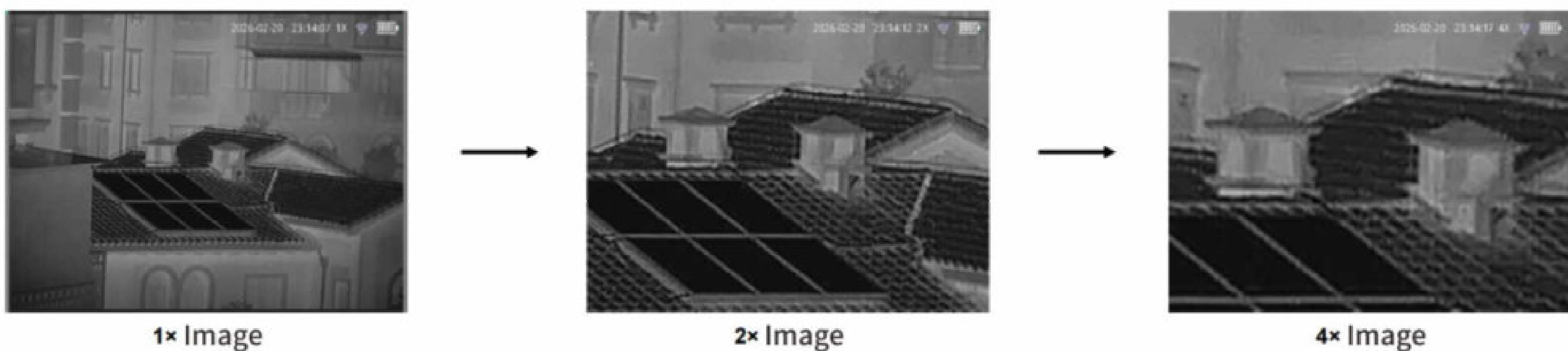
## 08 Pseudo-color Mode

When powered on, short press the M key to switch to pseudo-color mode. Pseudo-color modes: White Hot, Black Hot, Iron Red, Desert Yellow, Green Hot, Red Hot, Sky, Edge.



## 09 Digital Zoom

When powered on, short press the down button on the main screen to cycle through digital zoom, with options for 1x, 2x, and 4x.



## 10 Outdoor Mode

When powered on, long-press the down key on the main screen to activate Outdoor Mode, and long-press the down key again to deactivate it.

## 11 Wi-Fi

Long press the M button to enter the menu, and select to turn on/off the Wi-Fi function.

## 12 Picture-in-Picture Settings

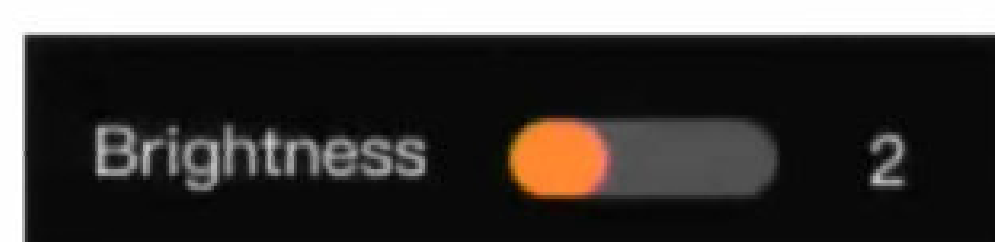
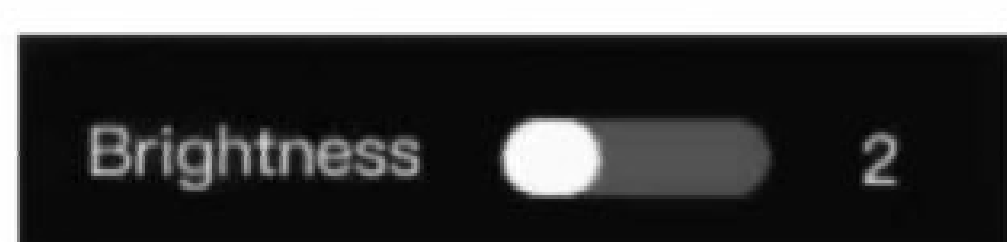
Long press the M button to enter the menu, and turn on/off the Picture-in-Picture feature. In this mode, using digital zoom will only magnify the small window screen.

## 13 Hotspot Tracking

Long press the M button to enter the menu, and select to turn on/off hotspot tracking

## 14 Brightness Adjustment

Long press the M key to access the menu, adjust using the up and down keys. Brightness adjustment range: 0 to 10.



## 15 Contrast Adjustment

Long press the M key to access the menu, adjust using the up and down keys. Contrast Adjustment Range: 0 to 10.

## 16 Sharpness Adjustment

Long press the M key to access the menu, adjust using the up and down keys. Sharpening adjustment range: 0 to 7.

## 17 Electronic Compass

Long press the M key to enter the menu, and select turn on/off the electronic compass function.

## 18 Attitude

Long press the M key to enter the menu, and select to turn on/off the level and pitch functions.

## 19 Compass Calibration

Long press the M key to enter the menu, where you can calibrate the device and set the offset value.



## 20 Calibration Mode

Long press M key to enter the menu, and enter the sub-menu of gun calibration, you can set the gun type, X-axis coordinates, Y-axis coordinates, reticle style and reticle color respectively.



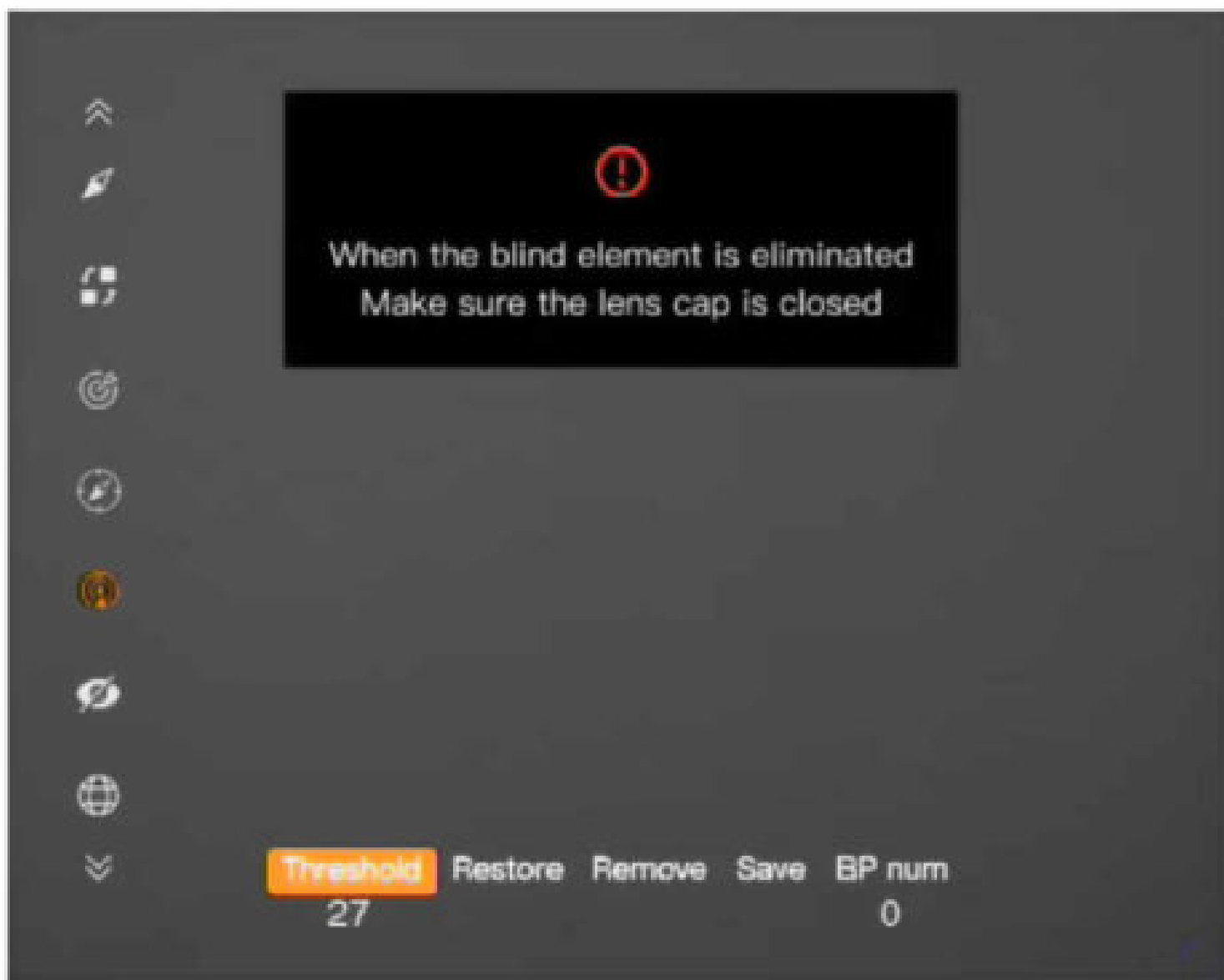
## 21 Status hidden

Long press the M key to enter the menu, and select to turn on/off the status bar information.



## 22 Correct Defective Pixel

Long press the M key to enter the menu, go to the bad pixel correction submenu, adjust the X/Y coordinates to the position of the bad pixel, and then proceed with the bad pixel elimination and save according to the options.



## 23 Language Settings

Long press the M key to enter the menu, select "Language Settings" to enter the submenu, and choose different languages using the up and down keys.

## 24 Date/Time

Long press the M key to enter the menu, and proceed to set the system's date and time.

## 25 Video

Long-press the M key to enter the menu, select "Video," and adjust the OLED color tone. "Cool/Warm" options are available.

## 26 Restore Factory Settings

Long press the M key to enter the menu, select "Restore Factory Settings" to enter the submenu, and follow the prompts to choose between restoring or canceling the factory settings using the up and down keys.

## 27 Version Information

Long press the M key to enter the menu, go to the "Version Information" submenu, and check the device version information.

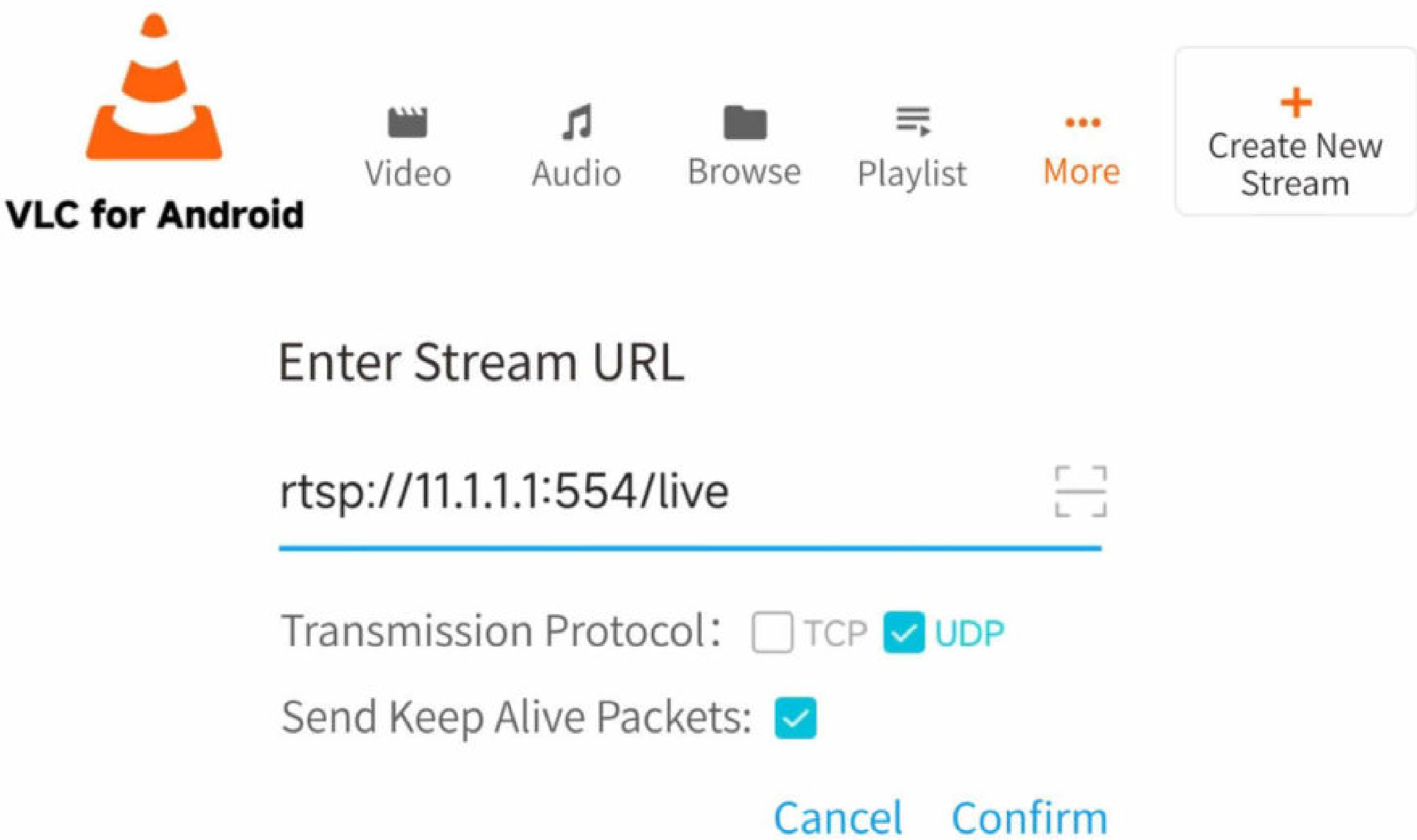
## 28 Read Data

Insert the Type-C data cable into the bottom Type-C interface, connect the other end to the computer. Double-click "My Computer" on the desktop to access and manage the photos and videos stored on the SD card in the device.

Note: All photos are stored in the 'Image' folder, and all videos are stored in the 'Video' folder.

## 29 Exploring through the App

Enable the hotspot feature in the product's menu, with the hotspot name set to Camera-IR. Turn on the Wi-Fi function on your phone and connect to 'IR-Camera', with the password '87654321'. Download a streaming player from the app store capable of creating streams. Taking VLC player APP as an example, open the VLC player APP, click on more options, and create a new stream (the software download can be found in the app store or browser). The address is: rtsp://11.1.1.1:554/live



By entering the address and clicking "Connect", live stream the image feed on to your smartphone with the app of the device.

## I 10 Common Troubleshooting Guide

1. Device won't turn on

Solution: Replace the battery.

2. Device can't take photos/record videos

Solution: Internal storage is full. Transfer and format the memory.

3. Device displays incorrect time

Solution: Reset the product's time and date in the menu.

4. Screen turns off during use

Solution: Short press the forward button to wake up from sleep and light the screen.

5. Blurry imaging during use

Solution: Manually adjust the lens for focus until the display is clear.

## I 11 Storage and Transportation

Here are methods for the product storage and transportation. To prevent potential dangers and property loss, please read carefully before use.

Storage:

1. Store the device in an environment of  $-45^{\circ}\text{C}$  to  $60^{\circ}\text{C}$ , with relative humidity not exceeding 95%, free from corrosive gases, and with good indoor ventilation.

2. Charge the battery every three months at fixed intervals.

Transportation:

During transportation, avoid rain, water immersion, upside-down positioning, and prevent severe vibration and impact. Handle with care during transportation, and strictly avoid dropping.



## FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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

### RF Exposure Information

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.