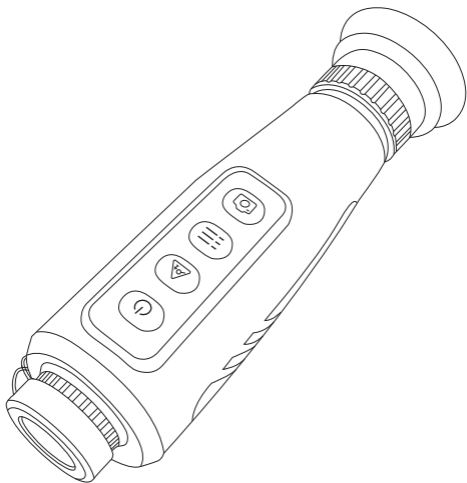


English

# VOGAKO

Handheld Thermal Monocular



Product User Manual

# 1.Introduction

## 1.1 Device Description

The handheld observation Thermal Imaging Monocular telescope is equipped with a 256×192 infrared detector and a 1.43-inch AMOLED display. It supports observation, maximum temperature target tracking, Wi-Fi image transmission and other functions. The monocular telescope is mainly used in outdoor search and rescue, bird watching, camping, hiking, tourism, hunting and other scenes.

## 1.2 Features

- Adopt high-performance AI chip and image detail enhancement technology.
- Support wireless hotspot connection and mobile phone APP connection.
- Built-in memory module supports video recording and photo taking.
- Built-in rechargeable lithium battery, which can be used continuously for 10 hours after charging.
- Support firmware update via USB flash drive and APP.

## 1.3 The main function

### Hot Spot Tracking

Detect and mark the highest temperature in the scene.

### Internet function

Support hotspots, add Thermal Imaging Monocular through mobile phone APP to realize functions such as capture, record, and parameter configuration.

### Storage

Built-in storage (up to 32G), supports recording, video recording and taking pictures.

### Digital zoom

Support 1.0x, 2.0x, 4.0x, 8.0x

### GTshare APP

A software that can obtain real-time video of the Thermal Imaging Monocular and control the Thermal Imaging Monocular

### Scene Mode

Normal mode, Outline mode, City mode, Forest mode, Rainforest mode, Bird watching mode.

### Color Mode

Black hot, White hot, Red hot, Green hot, Iron red hot.

### Data transmission (USB-C interface)

Supports data transmission, external microphone input, USB-C to HDMI output, external CVBS display.

## 1.4 Standard Components



Thermal monocular x1



Manual x1



Lens cleaning cloth



Lanyard x1



Flannel bag x1



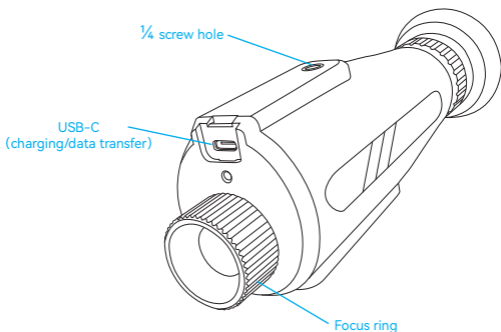
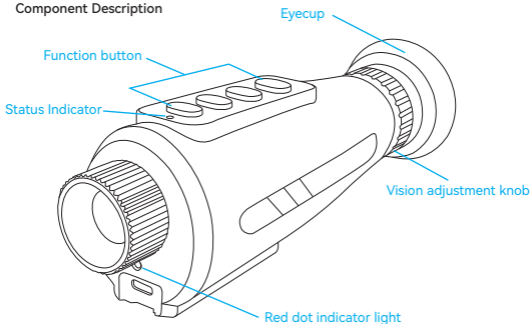
USB-C cable x1



EVA bag x1

## 2.Appearance

Component Description



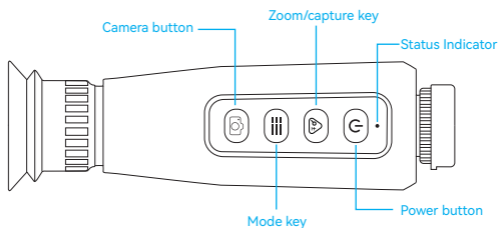
### Steps









- ① Please open the USB port sealing cover on the back of the device when charging.
- ② Use the USB power cable to connect the device's USB port for charging.

### Charging tips:

- Red light flashing: indicates that the device is charging abnormally.
- Red light always on: indicates that the device is charging.
- Red light off: indicates that the device is fully charged.

### 3.Key Function Description



Button	Function
 Power button	Short press: laser on/off; Long press: power on/off;
 Zoom/Record Button	Short press: media digital zoom/zoom in; Long press: start/stop video recording; Menu navigation: cursor up;
 Mode key	Short press: switch color palette; Long press: menu operation; Menu navigation: confirm;
 Capture button	Short press: switch scene mode; Long press: capture snapshot; Menu navigation: cursor down;
 Mode key +  zoom key	CVBS: on/off;
 Mode key +  capture key	Screen: on/off;
• Status Indicator	Red light: flashing – abnormal charging; always on – charging; off – fully charged; Green light: on once – device turned on; flashing – device upgrade;

Supports NUC function, and you can hear a slight sound from the shutter.

The Thermal Imaging Monocular panel has four physical buttons: power button, zoom button, mode button and screenshot button.



Note: After entering the Thermal Imaging Monocular menu, please refer to the menu description for the specific definition of the buttons.

## 4. Product Specifications

Model	T2515
Detector resolution	256x192
Ai super resolution	384x288
Pixel size	12 $\mu$ m
NETD	$\leq$ 40mk
Response band	8 $\mu$ m to 14 $\mu$ m
Lens (focal length)	15mm
Aperture	F=0.9
Field of view	11.69°×8.78°
Screen refresh rate	60 Hz
Digital zoom	1×、2×、4×、8×
Display	1.43-inch AMOLED display
Scene mode	Normal, Outline, City, Forest, Rainforest, Birdwatching
Color mode	Black hot, White hot, Red hot, Green hot, Iron red hot
Maximum temperature point tracking	Support
Wi-Fi AP	Support
Standby mode	Support
Storage	Built-in 32 GB
Recording Video	Support
Capture snapshot	Support
CVBS output	Support (via USB-C)
MIC input	Support (via USB-C)
HDMI output	Support (via USB-C)
Battery life (Wi-Fi off)	More than 10 hours (@25°C)
Battery capacity	3.7V 4000mAh
Operating temperature	-10°C to 50°C
Protection level	IP66
size	197mmx67mmx55mm
Weight	About 298g

# 5. Functional Description

## 1. Power on/off

The Thermal Imaging Monocular starts up. When it is powered off, press and hold the power button for 2 seconds. The indicator light turns green and the startup screen appears in the eyepiece. When it is powered on, press and hold the power button for 2 seconds to shut down the thermal imager.

## 2. Menu Description

In the main preview interface of the thermal imager, long press the Mode button to enter the main menu.



Short press: means the cursor moves upward;  
Long press: means turning on/off the recording function;

Short press: confirm/select pseudo color mode;  
Long press: pop up/exit menu;

Short press: means to select scene mode/move down;  
Long press: means to capture/take a photo;

## 3. Image adjustment

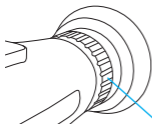
By adjusting the image's pseudo color mode, brightness, scene mode, and flat field correction (NUC) and other functions, the image can be displayed with the best effect.

- ①. After the Thermal Imaging Monocular is powered on, remove the protective cover in front of the lens.
- ②. Aim the thermal imager lens at the scene to be observed, and keep your eyes close to the eye mask.
- ③. Adjust the diopter adjustment knob clockwise or counterclockwise according to the user's vision.



### 3.1 Adjusting the diopter

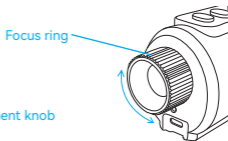
By adjusting the diopter adjustment knob, the Thermal Imaging Monocular can adapt to the vision differences of different users to obtain the best observation effect.



Vision adjustment knob

### 3.2 Adjusting the focus

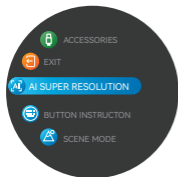
Use the focus ring to adjust the focus of the thermal imager to obtain the clearest image.



Note: When using the Thermal Imaging Monocular for the first time, you must first adjust the vision and then configure the functions.

#### 4. AI super resolution on/off

AI super-resolution on/off, on by default, AI super-resolution technology improves the display effect to the same as the display effect of the sensor with 384\*288



before super resolution

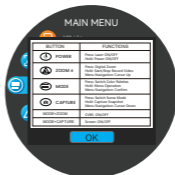
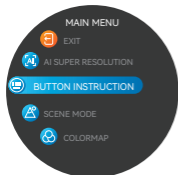


after super resolution

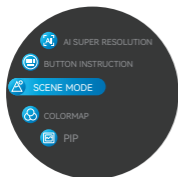


#### 5. Button functions

The menu picture shows the functions of the 4 buttons and the key combinations used



#### 6. Scene Mode



Normal



Outline



City



Forest



Rainforest



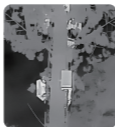
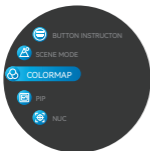
Birdwatching

#### 7. Brightness adjustment

1. When the device is powered on, long press the Mode button to enter the main menu and select Brightness Adjustment
2. Short press to adjust the screen brightness in levels 1 2 3 4 5.

## 8. Color Mode

For the same scene or target, select different pseudo color modes to get different display effects. In the main preview interface, short press to switch the pseudo color mode.



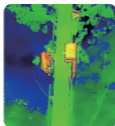
White hot



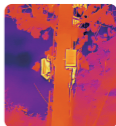
Black hot



Red hot



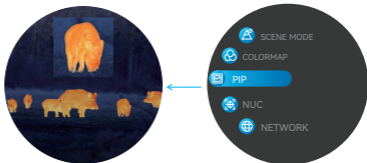
Green hot



Iron red hot

## 9. Picture-in-Picture

The Picture-in-Picture function captures a partial image of the center of the scene, enlarges the partial image, and overlays it on the main preview interface, making it easier to see the details of the key image.



Operation steps:

- ① Long press the key to enter the main menu
- ② Select PIP, short press the key to turn PIP on/off.
- ③ After PIP is turned on, digital zoom is performed, the image magnification of the main interface remains unchanged, and only the PIP image is enlarged or reduced.

## 10. Recording function

1. When the camera is powered on, long press the zoom button to start recording video. The recording icon and time will be displayed in the upper right corner of the image.

## 11. Capture function

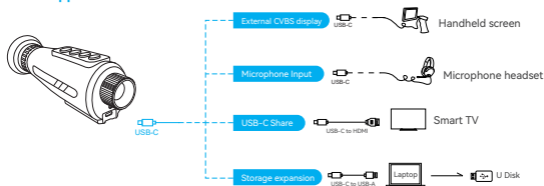
1. When the device is powered on, long press to capture a picture;
2. When recording a video, long press to capture a picture, and the capture output icon will appear above the image;

## 12. Expansion devices

Can connect external devices via USB-C, CVBS output, HDMI output, microphone input, etc.



### 13. Support USB-C to connect external devices



### 14. Network connection

The Thermal Imaging Monocular supports Wi-Fi or hotspot connection to the network for network access. When the battery level of the thermal imaging is less than 15%, the Wi-Fi and hotspot functions will be automatically turned off.

#### 14.1 Set up hotspot connection

Turn on the device hotspot mode, and use your mobile phone to directly connect to the device hotspot. After establishing a connection through the hotspot, connect the device to the app.

##### Operation steps

- ① Press and hold the key, select menu, and select AP option
- ② Turn on WiFi on your phone and connect to the thermal imager AP hotspot.
  - Wi-Fi name: Vogako-AP-last 6 digits of the serial number
  - Wi-Fi password: 12345678
- ③ Open the GT share client, select thermal imaging, scan equipment, and add equipment. Click on the client homepage to enter the observation access device to perform operations such as preview, recording, parameter configuration, and media file sharing.



Note: The device serial number can also be confirmed by referring to the instructions for Viewing Device Information.

#### 14.2 Set up Wi-Fi connection

Turn on the device Wi-Fi mode, set the mobile phone hotspot or router name as the device WiFi name, and then the device will automatically connect to the mobile phone hotspot or router WiFi. The mobile phone is connected to the same router WiFi. After the network connection is established, connect the device to the app.

##### Operation steps

- ① Press and hold the MENU button to open the menu, select the NETWORK option, and then select WiFi.
- ② Turn on WiFi on your phone and connect to the AP hotspot of the Thermal Imaging Monocular.
  - Wi-Fi name: Vogako-WIFI
  - Wi-Fi password: 12345678
- ③ After setting, the device will automatically connect to the phone's network. Please check the device to ensure that it has been successfully connected.

### 15. Install GTshare app

#### Prerequisites:

The phone system must be iOS 12 or above, or Android 7.0 or above.

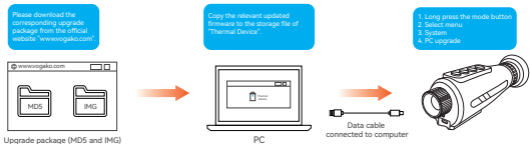


GTshare | 🔍



As the products are constantly updated and upgraded, the company reserves the right to make changes at any time without prior notice.

## 16.1 Firmware update via PC



## 16.2 Firmware update via U disk



## 6. Notes

1. The rated charging voltage of this product is DC5V. Please charge it in time when the battery is low to avoid over-discharge of the battery and reduce the life of the thermal imager.
2. This product is not recommended for long-term use in high temperature environment. The thermal imager will enter high temperature protection state and automatically shut down.
3. The recommended operating temperature of the product is  $-10^{\circ}\text{C}\sim 50^{\circ}\text{C}$ .
4. When using in a water environment, please first confirm that the USB interface cover on the top of the thermal imager is tightly closed.
5. In any case, avoid direct exposure of the thermal imager to strong radiation sources such as the sun and laser to avoid irreversible damage to the thermal imager.
6. When the thermal imager is not used for a long time, charge it at least once every 2 months during storage and store it in a dry and ventilated environment.
7. For thermal imagers equipped with red dot indicators, do not expose the red dot indicator to human eyes.
8. Do not charge in an environment above  $40^{\circ}\text{C}$ .

REP EC

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For more product feature introduction/user guide/software update/technical support, please visit the official [www.vogako.com](http://www.vogako.com)