MONOCULAR OUTDOOR THERMAL IMAGING TELESCOPE INSTRUCTION MANUAL

AIM Series

Contents

Preface

Respected users:

How are you! Thank you for purchasing our instrument. In order to use it in a better manner, we remind you to read the instruction for use carefully before use and keep it properly so as to look up in the future use.

Safety Instruction

Please ensure that you have read and understood the safety precautions described in the following text before using the product so that you can operate it correctly.

The safety precautions described in the following text guides you to operate the product and its accessories correctly and safely to avoid damage and loss to you, other people and the device.

⚠ Considerations

Please observe the following guide in order not to damage the product:

Don't assemble or dismantle the product without permission.

The product is a type of super precise equipment. Don't try to dismantle, assemble or remodel any part of the product. Repair of the product should be made by technical personnel designated by the company.

Avoid damage to probe of the product

Note: don't put the product close to strong heat source directly (such as electric iron). Otherwise, It may damage the probe of the product.

Product emits a clicking sound

When the product works, there is light sound of clicking every several seconds. This is normal phenomenon that the lens captures images.

⚠ Warning

The warning describes the acts that may cause harm to users. Please observe the following operation in order to avoid electric shock or personal injury.

- **If the product case is damaged, don't use it continuously.**

  Please contact the local distributors or agents of the company under such condition.

- **During the process of use, if the product is found with smoke,spark and the burnt smell, please stop using at once.**

  In case of such condition, the product power supply should be powered off first.After the smoke and peculiar smell disappears completely, please contact the local distributors or agents of the company.

- **Don't weld the battery without permission.**

  Such operation may damage the battery and result in leakage and explosion of the battery.

- **Avoid that the battery is impacted (such as collusion and falling, etc).**

  Such condition may damage the battery case or result in that the battery leaks or explode.

- **Please pull off the adapter on the power socket when charging is not made.**

  The adapter may get overheated if it is connected with power supply for a long time. This may cause overheating, deformation and fire.

- **Please ensure that the plug of the adapter is inserted into the specified power socket.**

  The adapter plug may be different due to the regions. Please make confirmation whether the specification of the adapter is consist with the specification of electric appliances in your region. Otherwise, this may cause overheating of the equipment, electric shock, fire, chemical leakage inside the battery, explosion and other serious consequences.

- **When the plug of the adapter or wire is damaged, stop using immediately.**

  Don't change the battery unless the plug of the charger is inserted into the socket completely.

- **Do not touch the electric wire with wet hands.**

  It is possible to cause electric shock when touching the electric wire with wet hands. When pulling out the electric wire, hold the electric wire head rightly to pull out the wire. Don't pull off the electric wire directly. Otherwise, the electric wire may be broken, causing electric shock and fire.

- **Forbid dip the product into water caught in rain.**

  If the case contact with any liquid, please wipe it dry immediately. If water or other liquid enters the inside of the instrument, please power off the power supply at once. Continuous use may result in product damage.

- **Clean the dust on the adapter plug and the data line.**

  When it is exposed to dusty and dump environment for a long time, the dirt surrounding the electric equipment will accumulate moisture. This may cause short circuit and fire.

● **Don't use abradant, isopropanol or solvent to clean the enclosure of the device.**
Such operation may cause the product case to be damaged.

● **The product temperature may increase after a long time of charging.**
You may feel scorching heat when the hands touch the sensors.

● **Problem caused by water condensation**
Don't bring the instrument into low temperature environment from high tempera-ture environment in a short time or from low temperature environment to high temperature environment. This may result in that the inside of the instrument and appearance produce water condensation. In such condition, the instrument should be placed into portable box or plastic bag. Before use, make it restore to the environmental temperature and take it out to use.If the product has water condensation inside, please power it off immediately.Otherwise, the instrument may be damaged. Operation is not allowed unless the water condensation disappears.

● **Avoid that the product is impacted (such as collision and falling, etc).**

Such operation may cause the product to be damaged. Please avoid such operation.

● **Long-time storage and regular charging.**

The product should be placed at a cool and dry environment if it not used for a long time. If the product installed with battery is stored for a long time, charging should be made regularly. Otherwise, the battery will run out and the service life will be shortened.

Preliminary Acquaintance with Infrared Thermal Imager

For a long time, infrared thermal imaging detection technology has become an important means to ensure Industrial safety in developed countries. Theapplication field includes electric power, metallurgy, petro-chemistry, machinery,coal, traffic, fire control and national defense, etc. It can not only carries out real-time detection at high voltage, high current and high speed operation to perform real-time detection for production and instrument but also need not power off the power supply, stop the machine or stop the production to find the potential problems and prevent occurrence of malfunction. The "non contact" modern detection technology is safe, reliable and quick. It is a type of technical revolution compared with traditional contact detection method.

The infrared thermal imaging technology is widely used in the following fields:

- Power equipment, transmission, transformer line inspection;
- Hidden fire source search in fire protection;
- Personnel search and rescue in the fire, and fire command;
- Analyze the location and heat loss of leak points in heat pipes and heating equipment;
- Determining the location of the heating fault of the operating train;
- Security department night monitoring.

Overview

This product belongs to outdoor thermal image telescope takes advanced uncooled focal plane infrared detector and high-quality optical lenses as the core. Combined with convenient and fast operating system, it has a small appearance design, fully functionalexpansion spare parts, long service life, firmess and durability, so it is suitable for various environments, and creates a "clear imaging, simple operation and easy to carry" infrared thermal imaging tools for users.This product is used for field animal observation, search and rescue, police law enforcement investigation, night patrol, outdoor sports, personalsecurity, etc. This product functions as photo taking and videos. You can browse the photos or videos taken through this unit or USB connected computer, so that several persons can observe at the same time creating possibilities for more applications.

Cleaning of the Products

Please use damp cloth or weak soap to clean the enclosure of the device. Don't use abradant, isopropanol or solvent to clean. The lens and screen should be cleaned with use of cleaning agents for professional optical glasses.

Lens Maintenance

Prevent damage of the infrared lens：

- ● Clean the infrared lens carefully. The lens is provided with refined anti-reflection coating.
- ● Don't clean with force to prevent damage of the anti-reflection coating.The selectable color palette.
- ● Use a cleaning solution for lens maintenance, such as alcohol-based commercial lens cleaners, alcohol, and a lint-free cloth or paper towel. Compressed air tanks can be used to remove loose particles.

Clean the lens:

- ● The compressed air tank or dry nitrogen ion gun (if applicable) may be used to blow the loose particles on the lens surface.
- ● Dip the lint free cloth in alcohol.
- ● Squeeze the excessive alcohol in the cloth or apply the lint free cloth on dry cloth lightly.
- ● Wipe the lens surface by making circular motion. Then discard the cloth.
- ● If it is necessary to repeat above step, please use new cloth to dip with the cleaning solution to wipe.

Instructions for Battery Charging

Use a USB cable to charge:

- This product has a built-in rechargeable battery.
- When the battery is low, "▭" will be displayed on the upper right of the screen. Please charge it through the Type-C USB interface in a timely manner.
- Unplug the USB cable after fully charging.

Performance Index

Product model		AIM 384	
Infrared detector	Detector type	VOx vanadium oxide	
	Resolution ratio	384×288	
	Pixel size	12μm	
	Working band	8~14μm	
	NETD	≤40mK @25℃, F#1.0, 25Hz	
	Frame rate	50Hz	
Infrared objective	Focus Mode	Manual	
	F-factor	1.0	
	Effective imaging surface	Φ8.2mm	
	Focus range	＞ 1.0m	
	Focal length	25mm	35mm
	Field of view angle	10.6°×7.9°	7.5°×5.7°
Detection distance	Infrared objective	25mm	35mm
	Character	1181m	1653m
	Wild boar	1042m	1458m
	Vehicle	3125m	4375m
Perception distance	Character	296m	413m
	Wild boar	260m	365m
	Vehicle	781m	1094m
Eyepiece	Focus length	16.0mm	
	Pupil distance	23mm	
	Pupil diameter	6mm	
	Visual adjustment	-6D~4D	

	Visual magnification	16.0X
Display	Display screen type	OLED
	Resolution ratio	1024×768
	Display size	0.39inches
System function	Language	Simplified Chinese, Traditional Chinese, English, Russian , Indonesia
	Electronic zooming	1x/2x/4x/8x
	False color	White hot, Black hot, Fire hot, Rainbow, Iron red, Cold color
	Brightness adjustment	1-10
	Contrast adjustment	1-10
	Camera/video	Supported
	Picture in Picture	Supported
	WIFI	Supported
	Hot point track	Supported
Storage	Capacity	Built-in 16G EMMC (the system occupies some space, and the actual size is about 13.8G)
	Picture format	JPG
	Video format	MP4
Interface	Usb Interface	Type-C export pictures, video and battery charging functions, CVBS output

Power supply	Rechargeable lithium battery	18650/3200mAh insertation	
	Overall power consumption	≤1.8W	
	Duration	≥5 hours	
Work/ storage environment	Working temperature	-20℃ ~ +60℃	
	Storage temperature	-30℃ ~ +70℃	
	Protection level	IP65	
Size/Weight	Product size	187*67*67mm	198*67*67mm
	Product weight	500g	500g

Product model		AIM 640	
Infrared detector	Detector type	VOx vanadium oxide	
	Resolution ratio	640×512	
	Pixel size	12µm	
	Working band	8~14µm	
	NETD	≤40mK @25℃, F#1.0, 25Hz	
	Frame rate	50Hz	
Infrared objective	Focus Mode	Manual	
	F-factor	1.0	
	Effective imaging surface	Φ8.2mm	
	Focus range	> 1.0m	
	Focal length	25mm	35mm
	Field of view angle	10.6°×7.9°	7.5°×5.7°
Detection distance	Infrared objective	25mm	35mm
	Character	1181m	1653m
	Wild boar	1042m	1458m
	Vehicle	3125m	4375m
Perception distance	Character	296m	413m
	Wild boar	260m	365m
	Vehicle	781m	1094m
Eyepiece	Focus length	16.0mm	
	Pupil distance	23mm	
	Pupil diameter	6mm	
	Visual adjustment	-6D~4D	
	Visual magnification	16.0X	

Display	Display screen type	OLED
	Resolution ratio	1024×768
	Display size	0.39inches
System function	Language	Simplified Chinese, Traditional Chinese, English, Russian , Indonesia
	Electronic zooming	1x/2x/4x/8x
	False color	White hot, Black hot, Fire hot, Rainbow, Iron red, Cold color
	Brightness adjustment	1-10
	Contrast adjustment	1-10
	Camera/video	Supported
	Picture in Picture	Supported
	WIFI	Supported
	Hot point track	Supported
Storage	Capacity	Built-in 16G EMMC (the system occupies some space, and the actual size is about 13.8G)
	Picture format	JPG
	Video format	MP4
Interface	Usb Interface	Type-C export pictures, video and battery charging functions, CVBS output

Power supply	Rechargeable lithium battery	18650/3200mAh insertion	
	Overall power consumption	≤1.8W	
	Duration	≥5 hours	
Work/ storage environment	Working temperature	-20°C ~ +60°C	
	Storage temperature	-30°C ~ +70°C	
	Protection level	IP65	
Size/Weight	Product size	187*67*67mm	198*67*67mm
	Product weight	500g	500g

Introduction to Product Structure

Infrared thermal image sensor

Diopter control   Brightness   Zoom in

Breathing light   Power key   False color   Camera   Focus length adjustment

Eyepiece
mask

Type-C interface

(Before use, open the safety cover first)
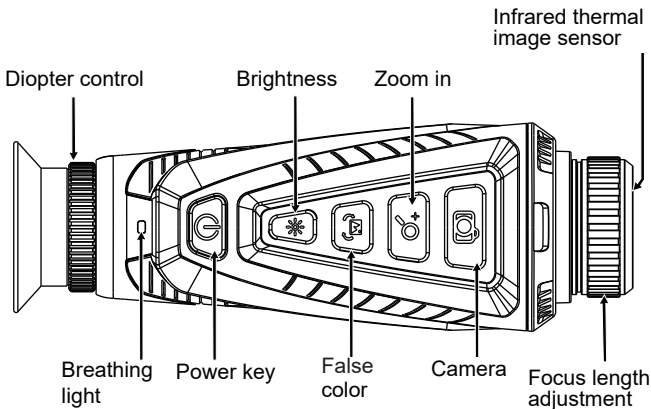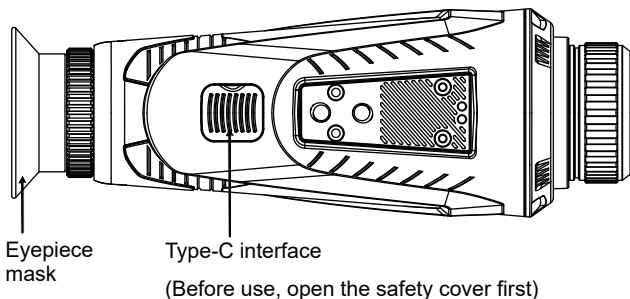
Focus length adjustment: adjust the focus to make the image clearer.

Type-C interface: used for charging batteries and connecting

computers to view device photos and video files.

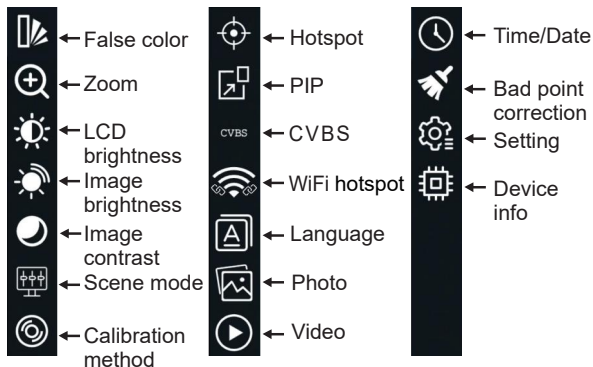Diopter adjustment: adjust the visual acuity to suit you.

Breathing light

Status	Not being charged	In charging	Fully charged
Power on	Blue	Red blue (purple)	Blue
Power off	None	Red	None

Key Description

Key/status		Press	Hold down
⏻ Power key	Main interface	It can be configure as screen off or freeze frame of picture through the menu.	A shutdown prompt box pops up for shutdown operation
	Menu interface	——	——
☼ Brightness key	Main interface	Brightness adjustment	Refresh shutter
	Menu interface	Down	——
🖼 False color key	Main interface	Pseudo color switching	Menu
	Menu interface	Enter	Return
⁺🔍 Zoom in key	Main interface	Zoom in (1x/2x/4x/8x)	Picture in picture on/off
	Menu interface	Up	——
📷 Camera key	Main interface	Camera	Turn on/ off recording
	Menu interface	——	——

Menu Description

🇮🇿	← False color	⊕	← Hotspot	🕐	← Time/Date
⊕	← Zoom	🔲	← PIP	✖	← Bad point correction
☀	← LCD brightness	CVBS	← CVBS	🔲	← Setting
☀	← Image brightness	🛜	← WiFi hotspot	🔲	← Device info
◐	← Image contrast	Ⓐ	← Language		
🔲	← Scene mode	🖼	← Photo		
◎	← Calibration method	▶	← Video		

False color: White hot, black hot, fire hot, rainbow, iron red, cold color.

Zoom : Electronic amplification IX, 2X, 4X,8X.

LCD brightness: The display brightness can be adjusted by 1 to 10 levels.

Image brightness: The brightness of infrared images can be adjusted by 1 to 10 levels.

Image contrast: The contrast of infrared image can be adjusted to 1~10 levels.

Scene mode: The application scene can be set as standard, city, jungle, and custom. In the custom mode, setting can be made for image detail intensity (0~10) and denoising intensity (0~15) according to the value.

Calibration method: The infrared image correction method can be set as manual calibration, automatic calibration and scene calibration.

Hotspot: The hot point tracking of infrared images can be set as on or off.

PIP: The picture in picture function is set as on or off in infrared image mode

CVBS: Set the on or off of external screen CVBS.

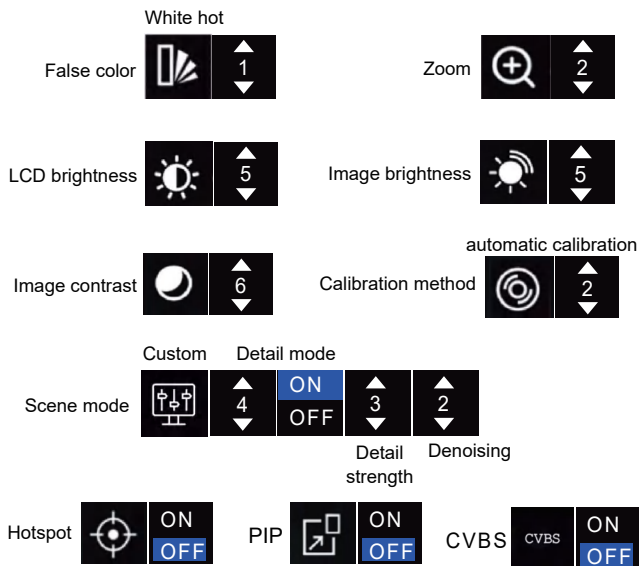Display description of the external screen:

1.When connecting the external screen to the device, it is necessary to manually enter the device menu to open the CVBS function, and the external screen will only display the device imaging screen.

2.When the CVBS function is enabled, it does not support the device to view video files.

2.Operation method:

● Hold down the false color key to enter the menu;

● Press the zoom in key or brightness key (up or down) to select the desired setting item, and press the false color color key to enter the setting;

● When setting a value, press the brightness key (decrease) or zoom in key (increase). After the setting is completed, press the false color key to return.

When entering the scene mode and selecting the custom mode, press the false color key again to pop up the detail mode settings. Press the

false color key to select the detail mode, detail intensity, or denoising intensity. After selecting it, press the brightness key(decrease) or zoom in (increase) to set the numerical value. After setting is completed, long press the false color key to exit (when the detail mode is selected as off, it is edge mode setting), as shown in the following figure.

White hot

False color ▮▯ 1

Zoom ⊕ 2

LCD brightness ☀ 5

Image brightness 📶 5

Image contrast ◖ 6

automatic calibration

Calibration method ◎ 2

Custom   Detail mode

Scene mode 🖥 4   ON / OFF 3   2

Detail   Denoising
strength

Hotspot ⊕ ON / OFF

PIP 🔲 ON / OFF

CVBS cvbs ON / OFF

Language: The language of the device can be set to Simplified Chinese, Traditional Chinese, English, Russian, Indonesia. After selecting the language, press the false color key to confirm and exit, as shown in the following figure.

Photos: Photo list, view photos.

Video: Video list, view the video, as shown in the figure below.

Photo(2/6)	Video(2/6)
IMG_20230313_004742.jpg	VID_20230313_004742.mp4
IMG_20230313_004741.jpg	VID_20230313_004741.mp4
IMG_20230313_004740.jpg	VID_20230313_004740.mp4
IMG_20230313_004739.jpg	VID_20230313_004739.mp4
IMG_20230313_004737.jpg	VID_20230313_004737.mp4
IMG_20230313_004730.jpg	VID_20230313_004730.mp4

24

Time/Date: Set the date (year, month, day) and time (hour, minute), time format (12-hour, 24-hour), and date format (year/month/day, day/month/year, month/day/year).

Operation method: Press the false color key to select year, month, day, hour, minute, and then press the brightness key (reduce) or zoom in key (increase) to set it. Press the brightness key or zoom in key to convert the time and date formats. After setting, long press the false color key to save and exit, as shown in the following figure.

25
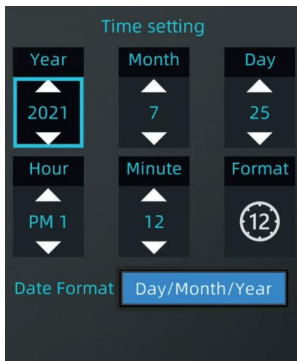
Bad point correction: Manual bad point correction. After entering the bad point correction, press the false color key or brightness key (Left or right), press the camera key or zoom in key (up or down) to adjust the cursor position, press the power key to confirm the removal of bad points, and hold down the power key to exit bad point correction.

Settings: Set the power button short press function, recording interface, automatic shutdown time, recording duration, and picture in picture position.

● Short press the power button: It can be configure as screen off or freeze frame of picture through the menu.

● Video interface: Set whether to bring UI display information when recording;

● Automatic shutdown time: May set no shutdown, 5 minutes, 10 minutes, 20 minutes, 30 minutes.

● Recording duration: Set the duration of each video file, including 5 minutes, 10 minutes, 20 minutes and 30 minutes;

● Position of picture in picture: Set the position of picture in picture in the center, which can be set as upper right,upper mid,upper left, lower right, lower mid and lower left.

Operation method: Press the false color key to select the power key short press function, recording interface, automatic shutdown time, recording duration or picture in picture position, and then press

the brightness key or zoom in key to set it. After setting is completed,ong press the false color key to exit the setting, as shown in the following figure.

Set up	
Short press power key	**Video interface**
☑ Screen off	☐ Off
☐ Fixed picture	☑ On
Auto shutdown time	**Record time**
~~90~~	~~10~~
Do not turn off	20
~~5~~	~~30~~
PIP position	
~~Upper right~~	
Lower left	
~~Lower mid~~	
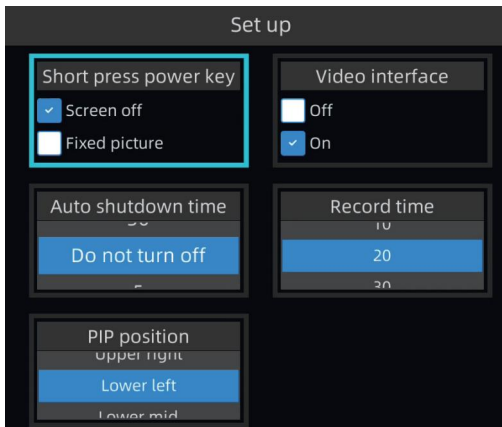
Device info: view the device model, detector pixel, detector type, screen size, screen pixel, battery capacity, hardware version, firmware version, application version, storage space, etc. You can also update applications, reset parameters, and carry out format for the device as shown in the figure below.

• Application update: Update software.

• Reset parameters: restore the factory settings.

• Format: Clear disk memory (mainly stored images, videos).

Device info

Model: AIM 384   Battery capacity: 3200mAh(typ)
Detector pixel: 384x288   Hardware version: V1.0.1
Detector type: VOx   Firmware version: V1.0.0
Screen size: 0.39(OLED)   Application version: V1.0.0
Screen pixels: 1024x768

Storage space
Used 66.0MB/14174.0MB

App update   Reset parame   Format

Photos and Videos

View photos: Select photos from the menu, open the photo list, and press the false color key to view the photos. When viewing a photo, press the zoom in key to view the previous photo, and press the brightness key to view the next photo.

Photo deletion: In the photo list, pressing the camera key will prompt you to delete the photo.Press the brightness key or zoom in key to select "OK", and then press the false color key to delete the image, as shown in the following figure.

View Video: Select Video from the menu, open the video list, and press the false color key to view the video.

Delete video: In the video list, press the camera key to pop up a prompt to delete the video. Press the brightness key or zoom in key to select "OK", and then press the false color key to delete the video.
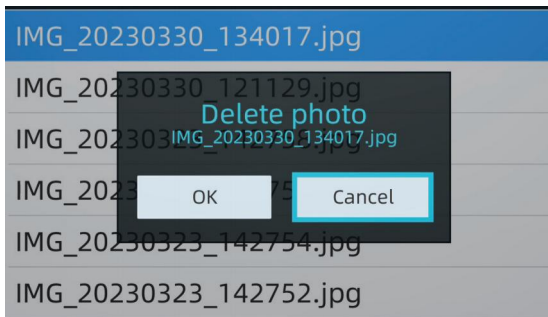
Introduction to the False Color

The false color can be used to change the pseudo color display of infrared images on the display screen. Some color palettes are more suitable for specific applications and can be set as needed. The color palette is divided into six types: White hot, Black hot, Fire hot, Rainbow, Iron red, Cold color.

These color palettes work best with high thermal contrast, providing additional color contrast between high and low temperatures. Choosing an appropriate palette can better display the details of the target object.

The following is a picture taken with the same object but different palettes selected:

White hot

Black hot

Fire hot
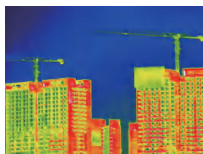
Rainbow
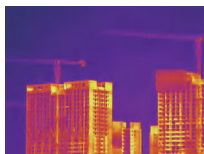
Iron red
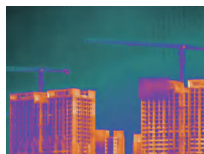
Cold color

WIFI Hotspot Settings

Find WiFi hotspot in the menu and hold down the false color key to enter WiFi settings.

WiFi name, password, and MAC address can be found, and the name and password can also be adjusted as shown in the following figure.
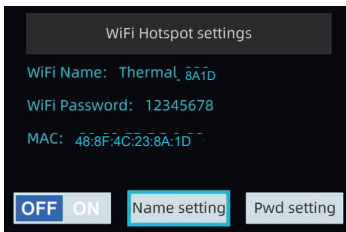
Note: The name and password can only be set when WiFi is turned off.

Operation method: After entering WiFi settings, press the zoom in key or brightness key (left or right) to select WiFi on/off, name settings, and password settings.

WiFi on/off setting: Press the false color key to set on or off.

WiFi name and password settings: Press the false color key to enter, press the false color key or brightness key (left or right), press camera key or zoom in key (up or down) to select letters. Select and press the power key to confirm. After the setting is completed, select "√" and press the power key to confirm and exit the name settings, as shown in the following figure.

Convert numbers →

Convert letters to → uppercase/lowercase

WiFi Name   Thermal_ 8A1D
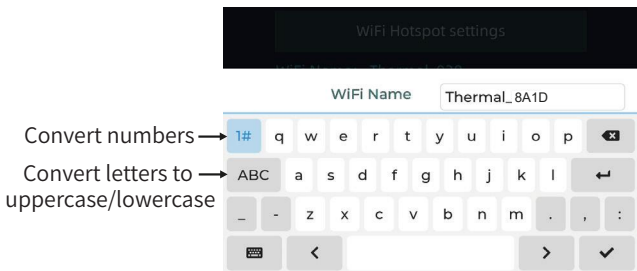
Connecting WIFI Hotspot

For Android system, please download the APP software.

Scan the code to download the app

Connect the device hotspot after the device is powered on.

The default connection hotspot name of this device: Thermal_xxxx

(xxxx is the last four digits of MAC),Password: 12345678.

Open the APP software to enter the interface, the interface is

displayed as follows:

" " Gallery, view pictures and videos.

When entering the picture list/video list, check the picture/video and click " ⋮ " at the top right to delete or share the picture/video.

" " Snap the image.

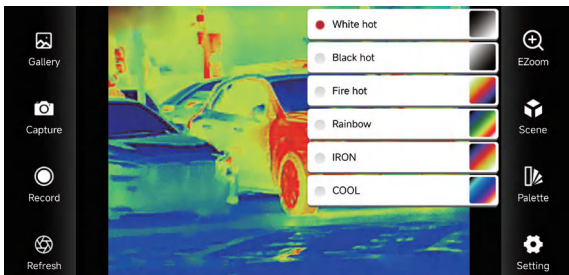" " Record, click this icon to record video, click again to end recording.

" " Refresh, refresh block.

" " Zoom, Can be enlarged 1x, 2x, 4x,8x.

Click the " " icon to replace the scene. It can be set to standard, city, forest,custom,As shown below.

Click the " " palette icon, which can be set to white hot, black hot, fire hot, rainbow, iron, cool six color palettes.

Click " ⚙ " to set icons, search device, language, view the version information, There are four languages available: Simplified Chinese, Traditional Chinese, English, and Russian, As shown below.
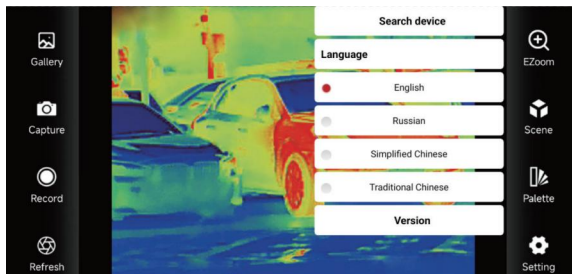
Search device: Search the current device and automatically connect.
Version information: View version information.
Note: When the default hotspot is used for the first time, connect the default hotspot.

ABOUT US

ABOUT US

EVER VIEW

When it comes to quality, we ensure that every product meets the highest standards so that every customer can experience our commitment to excellence. When facing customers, we always put their needs and satisfaction first and provide a service experience that exceeds expectations.

Our Mission
Customer first, excellent quality

Become the world's leading technical solution provider in the field of night vision and thermal imaging, lead the future with innovation, become a model of sustainable development in the industry, and promote industry progress.

Our Vision
Innovation driven, sustainable development

We adhere to the principles of honesty and transparency, make products serve customers, give back to customers with quality, continue to innovate, and promote technological development.

Our Values
Integrity, responsibility, win-win, enterprising

EVIEW

Customer first, excellent quality, innovation-driven, sustainable development, integrity, responsibility, win-win, enterprising.

Working Hours
Monday - Friday 7/24 Hours
Saturday 09:00 - 18:00
Sunday 09:00 - 18:00
Emergency:
(+44) 7731 6209233
(+44) 7716 697852
(+44) 7935 118949
(+1) 315 300 6522

Contact Us
High-tech Industrial Park, XY City, HN Province, CN
Telephone: (+44) 7731 620923
wuyongxin999@outlook.com
zhaoyinghui293@gmail.com
zhangxia774@gmail.com
Time: 7/24 Hours

Our Gallery

36