HIKMICRO

User Manual

Thermal Monocular

THUNDER 2.0 SERIES

V5.5.88 202404

Contact Us

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1 Overview

HIKMICRO THUNDER 2.0 Thermal Monocular featuring high thermal sensitivity ensures perfect detail recognition even in the hardest weather conditions when the object and background are with minimal temperature difference. With an extended operation time, the monocular is mainly applied to scenarios such as hiking, hunting, searching and rescuing.

1.1 Main Function

- **Brightness & Tone Adjustment**: You can adjust the brightness and tones as needed.
- **Hot Tracking**: The device can detect the highest temperature in the scene and mark the spot. This function varies according to different camera models.
- **Audio & Recoil-activated Recording**: The device can record audio and support recoil-activated recording.
- **Image Calibration**: You can adjust the image window position as required. See *Calibrate Image*.
- **App Connection**: The device can capture snapshots, record videos, and set parameters by HIKMICRO Sight app after being connected to your phone via hotspot.

1.2 Appearance

There are two types of devices. The appearance of the device may vary. Please take the actual product for reference.

Note

Pictures in this manual are for illustration purpose only. Please take the actual product for reference.

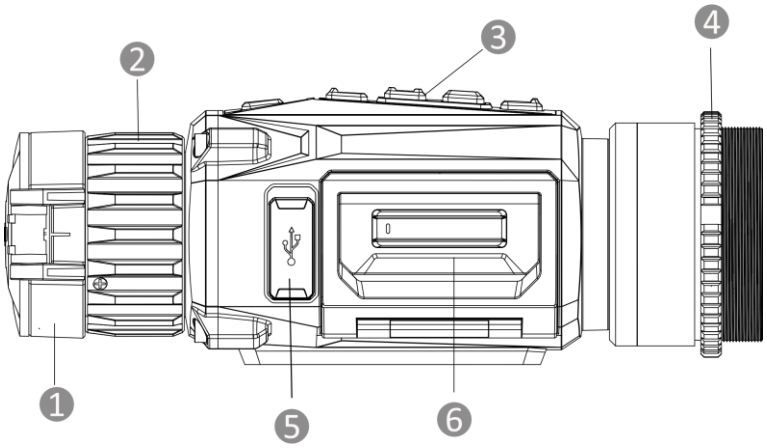


Figure 1-1 Appearance I

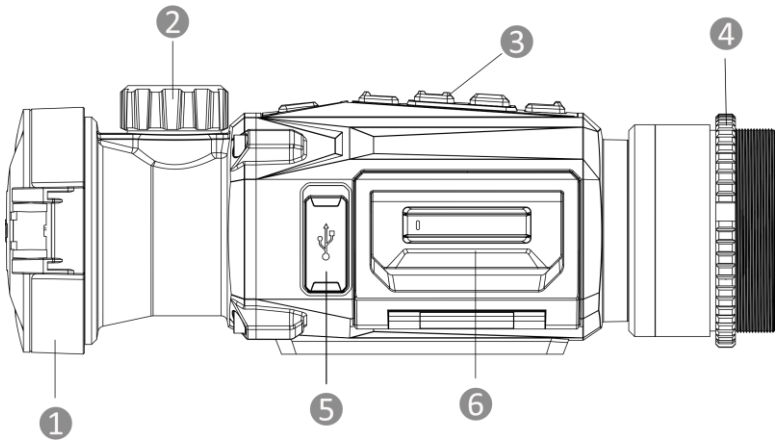


Figure 1-2 Appearance II

Table 1-1 Description of Components

No.	Component	Description
1	Lens Cover	Protects the lens.
2	Focus Ring/Knob	Adjusts focus to obtain clear targets.
3	Buttons	To set functions and parameters.
4	Fixing Ring	Holds the adapter in place.
5	Type-C Interface	To connect the device to power supply or transmit data with a type-C cable.
6	Battery Compartment	For holding the battery.

Button Description

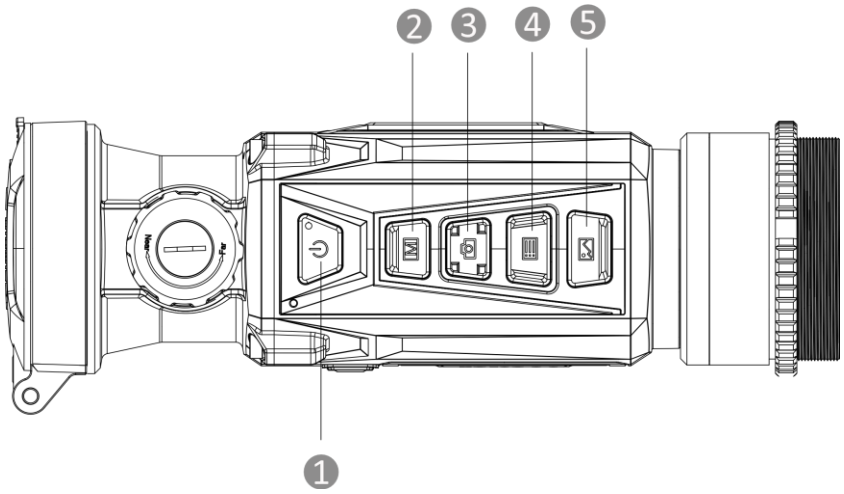
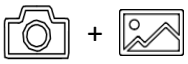


Figure 1-3 Buttons on Device

Table 1-2 Button Description

No.	Icon	Button	Function
1		Power	● Press: Standby mode/Wake up device. ● Hold: Power on/off.
2		Mode	● Press: Switch palettes. ● Hold: Correct non-uniformity of display (FFC).
3		Capture	● Press: Capture snapshots. ● Hold: Start/Stop recording videos.
4		Menu	Non-Menu Mode: ● Press: Enter the quick menu. ● Hold: Enter the main menu. Menu Mode: ● Press: Confirm/Set parameters. ● Hold: Save and exit menu.
5		Image	Clip-On Mode: Press to hide/display all OSD information. Monocular Mode: ● Press: Switch digital zoom. ● Hold: Turn on/off PIP mode.
2 + 3	+	Mode + Capture	Hold to switch to monocular/clip-on mode.

3 + 5		Capture + Image	Hold to enter the image calibration setting interface. (Only supported in clip-on mode.)

Note

The power indicator stays solid red when the device is on.

2 Preparation

2.1 Install Battery

2.1.1 Battery Instruction

- The device supports removable li-ion battery. The charging limited voltage of the battery is 4.2 V. The battery voltage and capacity is 3.6 V/4.4 Ah (15.84 Wh).
- Charge the battery for more than 4 hours before first use.
- Please purchase the battery recommended by the manufacturer if necessary.
- Remove the battery if the device is not used for a long time.

2.1.2 Change Battery

Insert the batteries into the battery compartment.

Before You Start

Make sure to power off the device before removing the battery.

Steps

1. Lift the battery compartment cover handle, and pull the battery compartment cover outwards.

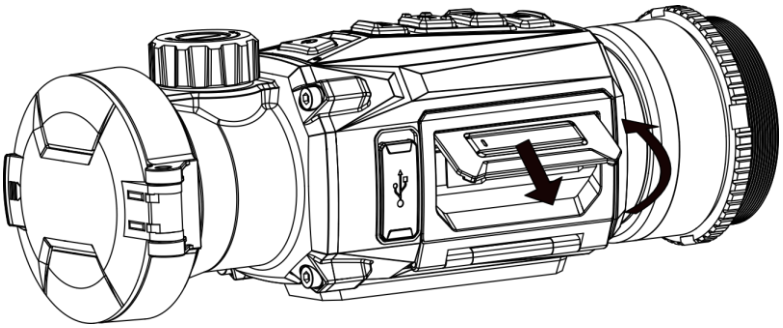


Figure 2-1 Pull Out the Battery Compartment Cover

2. Push the battery latch aside (as the arrow shows), and release the battery.

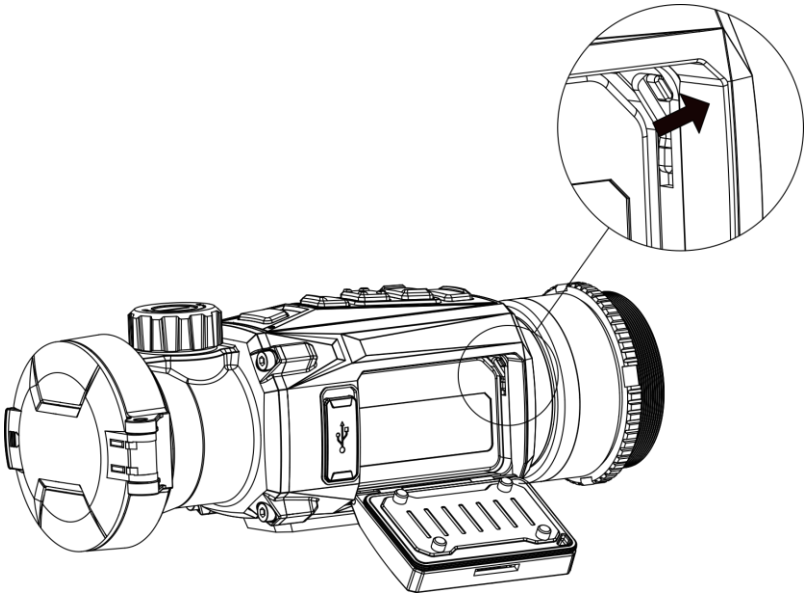


Figure 2-2 Unlatch the Battery Latch

3. Insert the battery into the battery compartment. The latch locks the battery in place when the battery is fully inserted.

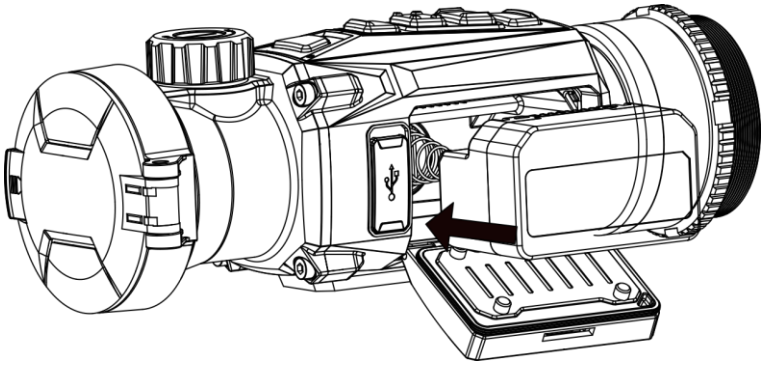


Figure 2-3 Insert the Battery

4. Push the battery compartment cover until it clicks into the locked position.

2.2 Cable Connection

Connect the device and power adaptor with a type-C cable to power on and charge the device. Alternatively, connect the device and PC to export files.

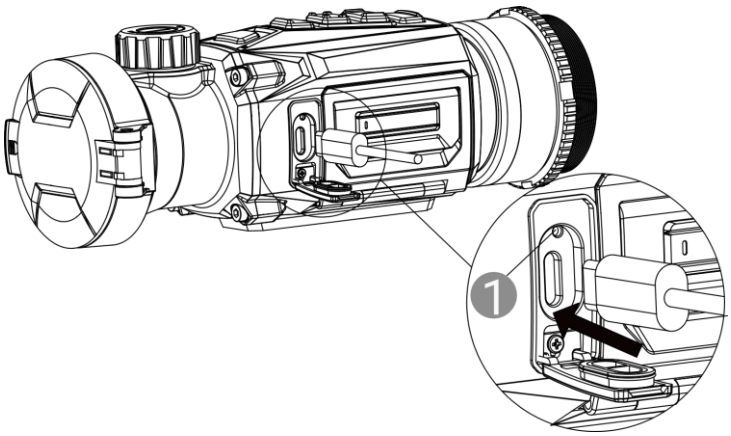


Figure 2-4 Cable Connection

Charging indicator 1 statuses are as follows:

- Flashing Red & Green: error occurred.
- Solid Red: device is properly charged.
- Solid Green: device is fully charged.
- Off: device is not charged.

2.3 Install Adapter

Steps

1. Rotate the adapter clockwise until it tightened securely.

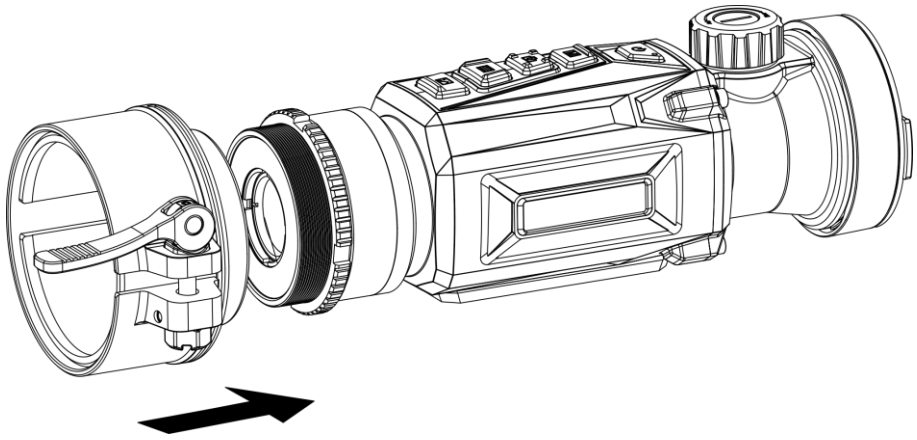


Figure 2-5 Install Adapter

2. Use the wrench in the package to tighten the fixing ring until the adapter is fixed on the device.

Note

- The adapter is not included in the package. Please purchase it separately as needed.

- The thread size is M52 × 0.75 mm. Purchase the adapter recommended by the manufacturer.

2.4 Remove Adapter

Steps

1. Rotate the adapter counterclockwise to loosen it.
2. Remove the adapter carefully.

2.5 Power On/Off

Power On

When the device is connected to cable or the battery is enough, hold to power on the device.

Power Off

When the device is turned on, hold to power off the device.

Note

- Power-off countdown will appear when you power off the device. You can press any key to interrupt the countdown and cancel the power-off.
- Automatic low battery power-off cannot be canceled.

Auto Power Off

You can set the auto power off time for your device.

Steps

1. Hold to show the main menu.
2. Go to **General Settings**, and select .
3. Press or to select the auto power off time as required.
4. Hold to save and exit.

Note

- See the battery icon for the battery status. means the battery is fully charged, means that the battery is low, and means the battery charging is abnormal.
- When the low power note shows, charge the battery.
- The auto power off takes effect only when you don't operate the device and the device isn't connected with HIKMICRO Sight app at the same time.
- The auto power off countdown will start again when the device reenters standby mode, or the device is restarted.

2.6 Set Eyepiece Mode

You can select different eyepiece mode according to actual using scene to improve the display effect.

Steps

1. In the main menu, select and press to confirm.
2. Press or to switch the eyepiece mode. **Monocular** and **Clip-On** modes are selectable.
3. Hold to save settings and exit.

Note

- You can also hold M + at the same time on live view interface to switch eyepiece mode.
- An additional monocular eyepiece is needed when using as a monocular. The monocular eyepiece is not included in the package. Please purchase it separately as needed.

2.7 Menu Description

2.7.1 Main Menu

In the live view interface, hold to enter or exit the main menu.

- Press to move up.
- Press to move down.
- Press to confirm.

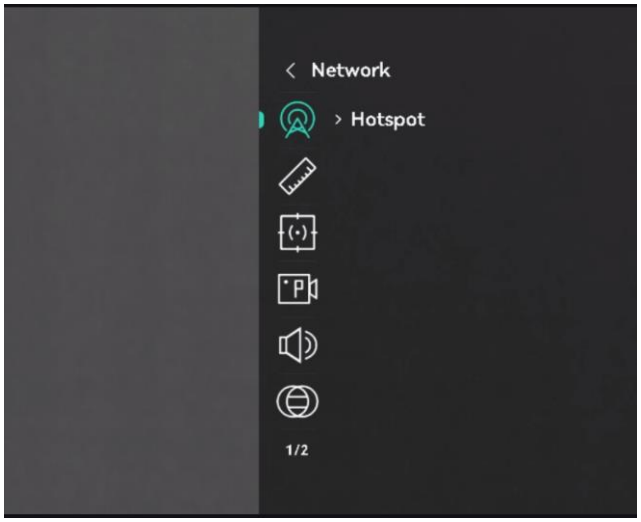


Figure 2-6 Main Menu

2.7.2 Quick Menu

In the live view interface, press to show the quick menu. You can set parameters such as **Brightness** and **Contrast** in the quick menu.

Note

This function varies according to different models.

2.8 App Connection

Connect the device to the HIKMICRO Sight app via hotspot, then you can capture picture, record video, or configure parameters on your phone.

Steps

1. Search the HIKMICRO Sight on App Store (iOS System) or Google Play™ (Android System) to download it, or scan the QR code to download and install the app.

Android System

iOS System

2. Hold to show the main menu.
3. Press or to select .

4. Press to enter the setting interface.
5. Press or to select **Hotspot**. The hotspot function is enabled.
6. Turn on the WLAN of your phone and connect to the hotspot.
   - Hotspot Name: HIKMICRO_Serial No.
   - Hotspot Password: Password: Go to **Hotspot** in the menu to check the password.
7. Open the app and connect your phone with the device. You can view the interface of device on your phone.

Note

- The device cannot connect to the app if you enter wrong password several times. Refer to ***Restore Device*** to reset the device, and connect the app again.
- If the password is not displayed, please upgrade the device to the latest version. Or enter the serial No. as the password.

2.9 Firmware Status

2.9.1 Check Firmware Status

Steps

1. Open the HIKMICRO Sight and connect your device to the app.
2. Check if there is an upgrade prompt on the device management interface. If there is no upgrade prompt, the firmware is the latest version. Otherwise, the firmware is not the latest version.

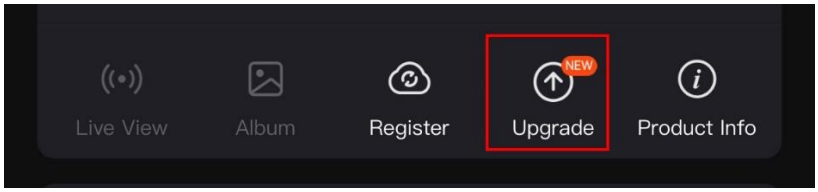


Figure 2-7 Check Firmware Status

3. (Optional) If the firmware is not the latest version, upgrade the device. See ***Upgrade Device***.

2.9.2 Upgrade Device

Upgrade Device via HIKMICRO Sight

Before You Start

Install HIKMICRO Sight on your phone and connect your device to the app.

Steps

1. Tap the upgrade prompt to enter the firmware upgrade interface.
2. Tap **Upgrade** to start upgrade.

Note

The upgrading operation may vary due to app updates. Please take the actual app version for reference.

Upgrade Device via PC

Before You Start

Please get the upgrade package first.

Steps

1. Connect the device to your PC with cable.
2. Open the detected disk, copy the upgrade file and paste it to the root directory of the device.
3. Disconnect the device from your PC.
4. Reboot the device, and the device upgrades automatically. The upgrading process will be displayed in the main interface.

Caution

During the upgrade package transmission, make sure the device is connected to your PC. Otherwise, it may cause unnecessary upgrade failure, firmware damage, etc.

2.10 Calibrate Image (Overview)

You can adjust and save the position of the image window for different users. See *Calibrate Image* for detailed instructions.

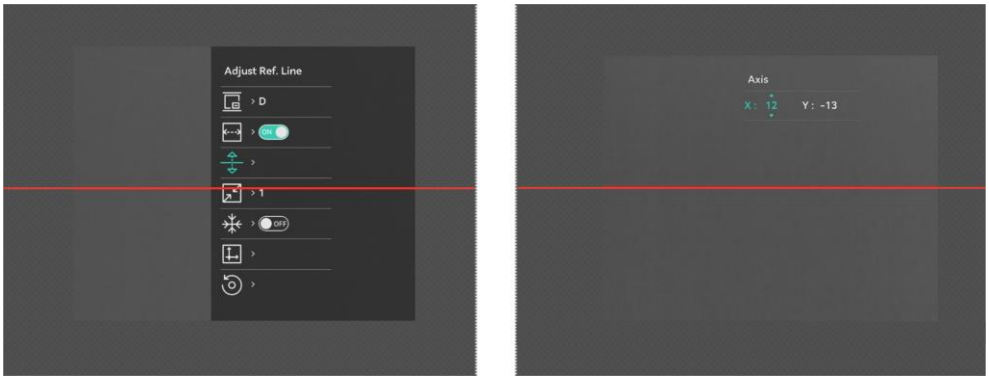


Figure 2-8 Image Calibration Effect

3 Image Settings

3.1 Adjust Focus

Steps

1. Power on the device.
2. Open the lens cover.
3. Hold the device and make sure the eyepiece covers your eye.
4. Adjust the focus ring/knob until the image is clear.

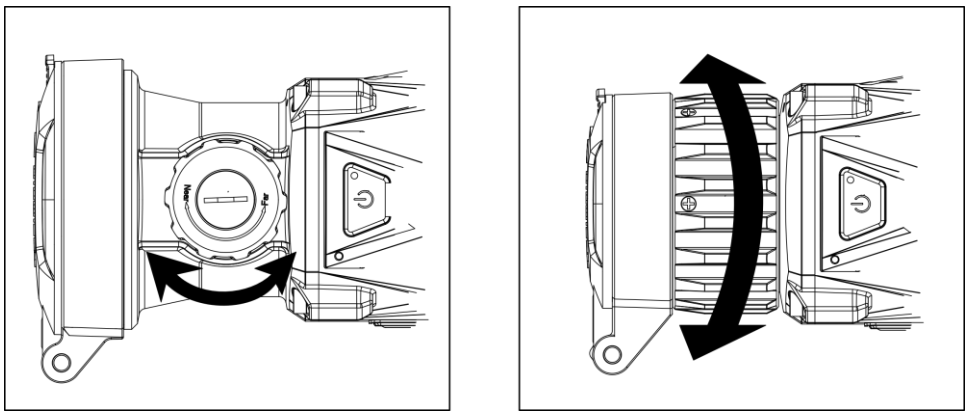


Figure 3-1 Adjust Focus

Note

When focusing, do not touch the surface of lens to avoid smearing the lens.

3.2 Adjust Brightness

You can adjust the brightness of the screen in the menu.

Steps

1. Press to show the quick menu.
2. Press or to select and press to confirm.
3. Press or to adjust brightness.
4. Hold to save settings and exit.

3.3 Adjust Contrast

Steps

1. Press to show the quick menu.
2. Press or to select and press to confirm.
3. Press or to adjust contrast.
4. Hold to save settings and exit.

3.4 Adjust Tone

Steps

1. In the main menu, select and press to confirm.
2. Press or to select a tone. **Warm** and **Cold** are selectable.
3. Hold to save settings and exit.

Figure 3-2 Adjust Tone

3.5 Adjust Sharpness

Steps

1. In the main menu, select and press to confirm.
2. Press or to adjust sharpness.
3. Hold to save settings and exit.

Figure 3-3 Sharpness Adjustment Comparison

3.6 Select Scene

You can select proper scene according to actual using scene to improve the display effect.

Steps

1. In the main menu, select and press to confirm.
2. Press or to switch scene.
   - **Recognition:** Recognition refers to recognition mode and is recommended in normal scene.
   - **Jungle**: Jungle refers to jungle mode and is recommended in hunting environment.
3. Hold to save settings and exit.

3.7 Set Palettes

You can select different palettes to display the same scene in different effects. Press M in the live view interface to switch palettes.

White Hot

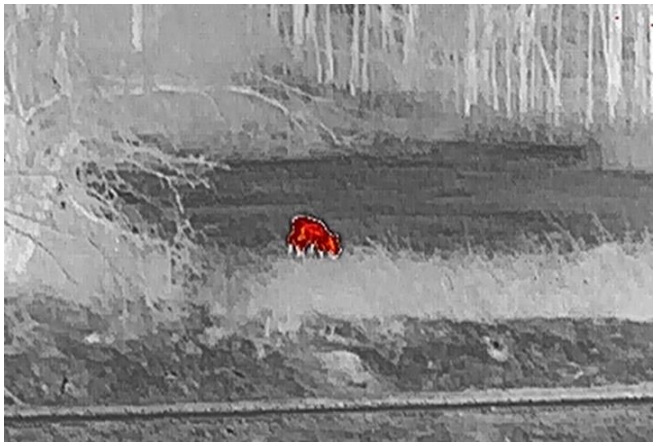
The hot part is light-colored in view. The higher the temperature is, the lighter the color is.

Black Hot

The hot part is black-colored in view. The higher the temperature is, the darker the color is.

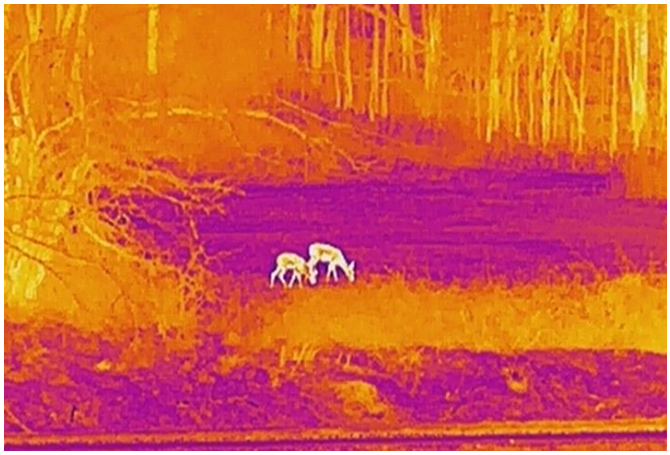
Red Hot

The hot part is red-colored in view. The higher the temperature is, the redder the color is.



Fusion

From high temperature to low temperature, the image is colored in from white, yellow, red, pink to purple.



3.8 Correct Defective Pixel

The device can correct the defective pixels on the screen which are not performed as expected.

Steps

1. In the main menu, select **Function Settings**, and press to enter the sub-menu.
2. Press or to select , and press to enter the DPC setting interface.
3. Press to select **X** or **Y** axis and press to confirm. If you select **X** axis, the cursor moves left and right; if you select **Y** axis, the cursor moves up and down.

4. Press or to move the cursor until it reaches the defective pixel.
5. Press twice to correct the dead pixel.

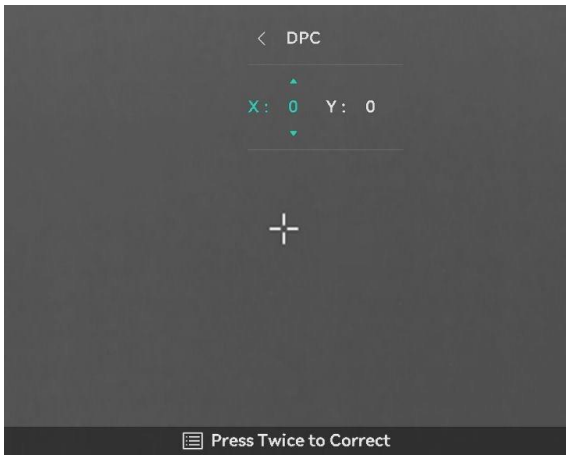


Figure 3-4 Correct Defective Pixel

Note

- The selected defective pixel can be magnified and displayed on the right of the interface.
- If the screen OSD blocks the defective pixel, move the cursor to reach the defective pixel, then the device performs mirror display automatically.

3.9 Flat Field Correction

This function can correct non-uniformity of display.

Steps

1. In the main menu, select **Function Settings** and press to confirm.
2. Press or to select **Image Calib.**, and press to confirm.
3. Press or to select a FFC mode, and press to confirm.
   - Manual FFC: In live view, hold M to perform FFC.
   - Auto FFC: The device performs FFC automatically.
   - External: Cover the lens cover, then hold M in live view to perform FFC.
4. Hold to save and exit.

Note

- You will hear a click and the image will freeze for a second when the device performs FFC.
- You can also hold M to perform FFC in auto FFC mode.

3.10 Calibrate Image

You can adjust and save the position of the image window for different users.

Note

This function is only supported in clip-on mode.

Steps

1. In the main menu, select **Function Settings** and press to confirm.
2. Press or to select , and press to confirm.
3. Select and press to confirm. Press or to adjust the menu size.
4. Select , and press to switch calib. profiles. You can set 5 calib. profiles.
5. Select , and press to enable reference line. Make sure the reference line is horizontal in the screen.
6. Select , and press to confirm. Press or to adjust the position of reference line to ensure the position consistency. Hold to exit the setting interface according to the prompt.
   - **OK:** Save the parameter and exit.
   - **CANCEL:** Exit but not save the parameters.
7. (Optional) Select , and press to freeze the image.
8. Select , and press to start calibration.
9. Press to select **X** or **Y** axis. Press or to set the coordinates until the window reaches the target position.

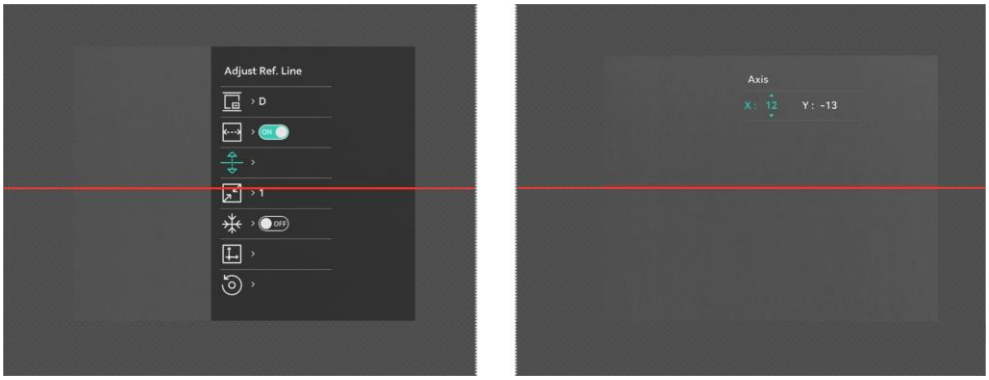


Figure 3-5 Actual Image Calibration Effect

10. (Optional) Press or to select , and press to confirm.
    Press **OK** to restore the view to default position, and **CANCEL** to return to the setting interface according to the prompt.

Note

The default position of image window may not be exactly at zero (X = 0, Y = 0). This is caused by slight individual differences of optical components, and it is a normal phenomenon.

11. Hold to exit image calibration

3.11 Set Picture in Picture Mode

Steps

1. In the live view interface, hold to enable PIP mode. The details show in the upper center.

Figure 3-6 PIP

2. Hold to turn off.

Note

- If the PIP function is enabled, only the PIP view zooms when adjusting the digital zoom ratio. The digital zoom of PIP view is 2×, 4×, and 8×.
- This function is only supported in monocular mode.

3.12 Adjust Digital Zoom

In the live view interface, press to adjust digital zoom of the device. The live view switches between 1×, 2×, 4×, and 8×.

Note

- When switching the digital zoom ratio, the left interface displays the actual magnification (Actual Magnification = Lens Optical Magnification × Digital Zoom Ratio). For example, the lens optical magnification is 4.3× and the digital zoom ratio is 2×, and the actual magnification is 8.6×.
- This function is only supported in monocular mode.

4 Measure Distance

The device can detect the distance between the target and the observation position with laser.

Before You Start

When measuring the distance, keep the hand and the position steady. Otherwise, the accuracy may be affected.

Steps

1. In the main menu, Press or to select , and press to enter the measurement interface.
2. Set the parameters for the target.
   1) Press to show the setting interface. Press or to select the target from **Deer**, **Grey Wolf**, **Brown Bear**, and **Custom**.
   2) Press to enter target height configuration interface. Press to select digit, and press or to change the number.

Note

The available height ranges from 0.1 m to 9.0 m.

   3) Hold to save the settings and return to the distance measurement interface.
3. Align the center of top mark with the edge of target top, and press to confirm.
4. Align the center of bottom mark with the edge of target bottom, and press to confirm.

Result

The top of the image displays the distance measurement result.

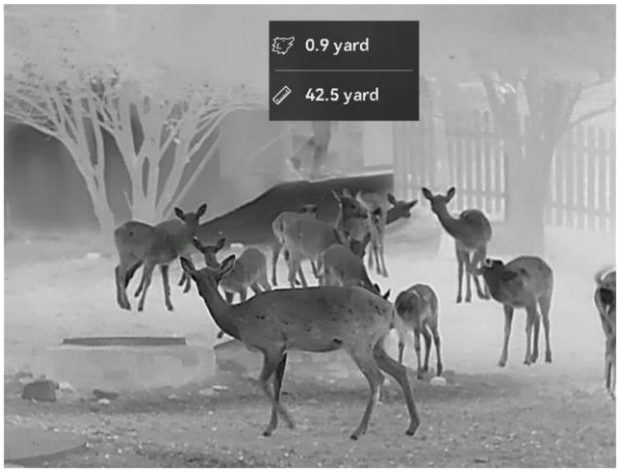


Figure 4-1 Distance Measurement Result

5 General Settings

5.1 Set OSD

This function can display or hide the OSD information on the live view interface.

Steps

1. In the main menu, select **Function Settings**.
2. Press or to select , and press to enter OSD setting interface.
3. Press to enable **OSD** first. You can press or to select and press to display or hide the necessary OSD information.
4. Hold to save and exit.

Note

If you turn off **OSD**, all OSD information on the live view will not be displayed.

5.2 Set Brand Logo

You can add brand logo to the live view interface, snapshots, and videos.

Steps

1. In the main menu, select **Function Settings**.
2. Press or to select .
3. Press to enable **Brand Logo**.
4. Hold to save the settings and exit.

Result

The brand logo is displayed at the bottom left of the image.

5.3 Burning Prevention

This function can prevent the detector of the thermal channel from being burned. When you enable this function, the shield will close if the grey scale of the detector reaches a certain value.

Steps

1. In the main menu, select **Function Settings** and press to confirm.
2. Press or to select .
3. Press to enable or disable the function.
4. Hold to save settings and exit.

Note

Avoid direct sunlight and enable the burning prevention function to reduce the risk of sensor damage from the heat.

5.4 Capture and Video

5.4.1 Capture Picture

In the live view interface, press to capture picture.

Note

- When capturing succeeds, the image freezes for 1 second and a prompt shows on the display.
- For exporting pictures, refer to *Export Files*.

5.4.2 Set Audio

If you turn on the audio function, the sound will be recorded with the video. When there is too loud noise in the video, you can turn off this function.

Steps

1. In the main menu, press or to select .
2. Press to enable or disable this function.
3. Hold to save settings and exit.

5.4.3 Record Video

Steps

1. In the live view interface, hold to start recording.

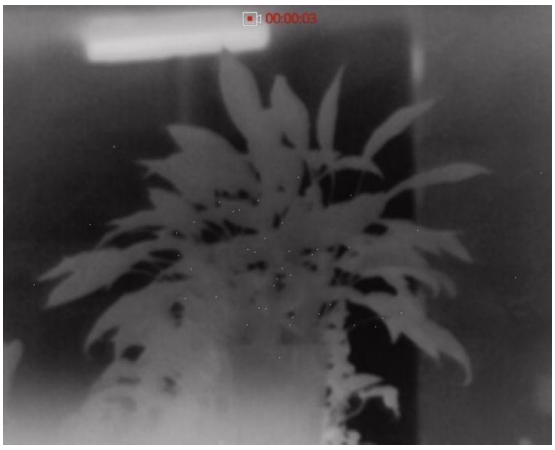


Figure 5-1 Start Recording

The upper left image displays the information of recording time.

2. Hold again to stop recording.

5.4.4 Prerecord Video

Note

This function is only supported in clip-on mode.

After you enable this function and select the prerecording time, the device can automatically start recording the 7 seconds before the recoil-activation and end recording the 7 seconds after the recoil-activation.

Steps

1. In the main menu, press or to select .
2. Press to enter the setting interface. Press or to enable the function.
3. Hold to save settings and exit.

5.4.5 Hot Tracking

The device can detect the highest temperature spot in the scene and mark it on display.

Steps

1. In the main menu, press or to select .
2. Press to mark the spot of highest temperature.
3. Hold to save the settings and exit.

Result

When the function is enabled, displays in the spot of highest temperature. When the scene changes, the moves.

Figure 5-2 Hot Tracking

5.5 Export Files

5.5.1 Export Files via HIKMICRO Sight

You can access device albums and export files to your phone via HIKMICRO Sight.

Before You Start

Install HIKMICRO Sight on your mobile phone.

Steps

1. Open HIKMICRO Sight and connect your device to the app. See *App Connection*.
2. Tap **Media** to access device albums.

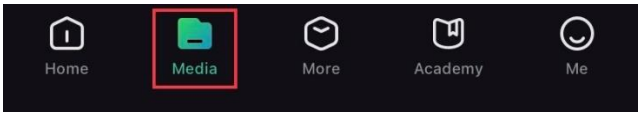


Figure 5-3 Access Device Albums

3. Tap **Local** or **Device** to view the photos and videos.
   - **Local**: You can view the files captured on app.

- **Device**: You can view the files of the current device.

Note

The photos or videos may not show in **Device**. Please pull down to refresh the page.

4. Tap to select a file, and tap **Download** to export the file to your local phone albums.

Figure 5-4 Export Files

Note

- Go to **Me** -> **About** -> **User Manual** on the app to see more detailed operations.
- You can also access device albums by tapping bottom left icon in the live view interface.
- The exporting operation may vary due to app updates. Please take the actual app version for reference.

5.5.2 Export Files via PC

This function is used to export recorded videos and captured pictures.

Before You Start

Make sure the device is turned on when connecting the cable.

Steps

1. Connect the device and PC with cable.

Note

Make sure the device is turned on when connecting the cable.

2. Open computer disk and select the disk of device. Go to the DCIM folder and find the folder named after the capture year and month. For example, if you capture a picture or record a video on February 2024, go to **DCIM** -> **202402** to find the picture or video.
3. Select and copy the files to PC.
4. Disconnect the device from your PC.

Note

- The device displays images when you connect it to PC. But functions such as recording, capturing and hotspot are disabled.
- When you connect the device to PC for the first time, it installs the drive program automatically.

6 System Settings

6.1 Adjust Date

Steps

1. In the main menu, select **General Settings**.
2. Press or to select , and press to enter the configuration interface.
3. Press to select the year, month, or day, and press or to change the number.
4. Hold to save settings and exit.

6.2 Synchronize Time

Steps

1. In the main menu, select **General Settings**.
2. Press or to select , and press to enter the configuration interface.
3. Press or to switch the clock system. 24-hour and 12-hour clock are selectable. If you select 12-hour clock, press , and then press or to select **AM** or **PM**.
4. Press to select the hour or minute, and press or to change the number.
5. Hold to save settings and exit.

6.3 Set Language

You can select the device language in this function.

Steps

1. In the main menu, select **General Settings**.

2. Press or to select , and press to enter the configuration interface.
3. Press or to select the language as required, and press to confirm.
4. Hold to save settings and exit.

6.4 Set Unit

You can switch the unit for distance measurement.

Steps

1. In the main menu, select **General Settings**.
2. Press or to select , and press to enter the configuration interface.
3. Press or to select the unit as required.
4. Hold to save settings and exit.

6.5 View Device Information

Steps

1. In the main menu, select **General Settings**.
2. Press or to select ., and press to confirm. You can view the device information such as version and serial No.
3. Hold to save settings and exit.

6.6 Restore Device

Steps

1. In the main menu, select **General Settings**.
2. Press or to select . Press to restore the device to defaults according to the prompt.

7 Frequently Asked Questions

7.1 Why is the monitor off?

Check the following items.

- Check whether the device is off-battery.
- Check the monitor after charging the device for 5 minutes.
- Check whether the device is in standby mode.

7.2 Capturing or recording fails. What's the problem?

Check the following items.

- Whether the device is connected to your PC. Capturing or recording is disabled in this status.
- Whether the storage space is full.
- Whether the device is low-battery.

7.3 Why the PC cannot identify the device?

Check the following items.

- Whether the device is connected to your PC with supplied USB cable.
- If you use other USB cables, make sure the cable length is no longer than 1 m.

Legal Information

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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 at the HIKMICRO website (www.hikmicrotech.com/).

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

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These clauses apply only to the products bearing the corresponding mark or information.

EU Conformity Statement

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Directive 2014/30/EU (EMCD), Directive 2014/35/EU (LVD), Directive 2011/65/EU (RoHS), Directive 2014/53/EU.
Hereby, Hangzhou Microimage Software Co., Ltd. declares that this device (refer to the label) is in compliance with Directive 2014/53/EU.
The full text of the EU declaration of conformity is available at the following internet address:
https://www.hikmicrotech.com/en/support/download-center/declaration-of-conformity/

Frequency Bands and Power (for CE)

The frequency bands and transmitting power (radiated and/or conducted) nominal limits applicable to the following radio equipment are as follows:
Wi-Fi 2.4 GHz (2.4 GHz to 2.4835 GHz), 20 dBm
For the device without a supplied power adapter, use the power adapter provided by a qualified manufacturer. Refer to the product specification for detailed power requirements.
For the device without a supplied battery, use the battery provided by a qualified manufacturer. Refer to the product specification for detailed battery requirements.

Directive 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

Directive 2006/66/EC and its amendment 2013/56/EU (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.

Industry Canada ICES-003 Compliance

This device meets the CAN ICES-003 (B)/NMB-003(B) standards requirements.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause interference, and

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

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment.

Conformité Industrie Canada ICES-003

Cet appareil répond aux exigences des normes CAN ICES-003 (B)/NMB-003 (B).

Cet appareil est conforme aux normes RSS exemptes de licence d’Industrie Canada. Son fonctionnement est soumis aux deux conditions suivantes :

(1) cet appareil ne doit pas causer d’interférences, et

(2) cet appareil doit accepter toute interférence reçue, notamment les interférences susceptibles d’occasionner un fonctionnement indésirable de l’appareil.

Cet appareil est conforme aux limites d’exposition au rayonnement IC RSS-102 établies pour un environnement non contrôlé.

KC

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Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
Note	Provides additional information to emphasize or supplement important points of the main text.
Caution	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
Danger	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss. Please read all the safety information carefully before using.

Transportation

- Keep the device in original or similar packaging while transporting it.
- Keep all wrappers after unpacking them for future use. In case of any failure occurred, you need to return the device to the factory with the original wrapper. Transportation without the original wrapper may result in damage on the device and the company shall not take any responsibilities.
- Do not drop the product or subject it to physical shock. Keep the device away from magnetic interference.

Power Supply

- The input voltage for the device should meet the Limited Power Source (5 VDC, 2 A) according to the IEC61010-1 or IEC62368 standard. Please refer to actual products and technical specifications for detailed information.
- Make sure the plug is properly connected to the power socket.
- DO NOT connect multiple devices to one power adapter, to avoid over-heating or fire hazards caused by overload.
- The power source should meet limited power source or PS2 requirements according to IEC 62368-1 standard.

Battery

- The device supports removable li-ion battery. The charging limited voltage of the battery is 4.2 V. The battery voltage and capacity is 3.6 V/4.4 Ah (15.84 Wh).
- Improper use or replacement of the battery may result in explosion hazard. Replace with the same or equivalent type only.
- Batteries of improper size cannot be installed, and may cause abnormal shutdown.
- Dispose of used batteries in conformance with the instructions provided by the battery manufacturer.
- The purchased batteries by users need to comply with the relevant international standards about battery safety (e.g. EN/IEC standards).
- Do not dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.

- Do not leave the battery in an extremely high temperature or low air pressure environment, which may result in an explosion or the leakage of flammable liquid or gas.
- Make sure the battery temperature is between 0 °C to 45 °C (32 °F to 113 °F) when charging.
- For long-term storage of the battery, make sure it is fully charged every half year to ensure the battery quality. Otherwise, damage may occur.
- Do not charge other battery types with the supplied charger. Confirm there is no flammable material within 2 m of the charger during charging.
- DO NOT place the device with battery or the battery alone near heating or fire source. Avoid direct sunlight.
- DO NOT swallow the battery to avoid chemical burns.
- DO NOT place the battery in the reach of children.

Maintenance

- If the product does not work properly, please contact your dealer or the nearest service center. We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.
- Wipe the device gently with a clean cloth and a small quantity of ethanol, if necessary.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the device may be impaired.
- Clean the lens with soft and dry cloth or wiping paper to avoid scratching it.

Using Environment

- Make sure the running environment meets the requirement of the device. The operating temperature shall be -30 °C to 55 °C (-22 °F to 131 °F), and the operating humidity shall be from 5% to 95%.
- DO NOT expose the device to high electromagnetic radiation or dusty environments.
- DO NOT aim the lens at the sun or any other bright light.
- Place the device in a dry and well-ventilated environment.
- Avoid equipment installation on vibratory surface or places subject to shock (neglect may cause equipment damage).
- 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.

Emergency

If smoke, odor, or noise arises from the device, immediately turn off the power, unplug the power cable, and contact the service center.

Manufacture Address

Room 313, Unit B, Building 2, 399 Danfeng Road, Xixing Subdistrict, Binjiang District, Hangzhou, Zhejiang 310052, China

Hangzhou Microimage Software Co., Ltd.

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