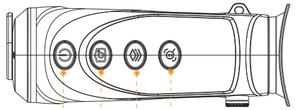
Thermal Monocular Camera

User's Manual V1.0.1

Button Description



- Power button: Press and hold for 3 seconds to power on or power off. Press to enable or disable the laser. The laser will automatically turn off after 10 seconds.

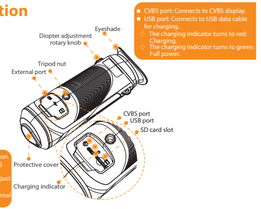
  Technical specification of the laser pointer:
  - Wavelength: 650 nm
  - Beam diameter < 15 × 20 mm (10 m)
  - Maximum average output power: 0.9 mW

  LASER RADIATION

  Laser can cause damages to eyes. Do not look directly at the laser beam or observe the beam with optical devices when the laser is on.

- Capture button: Press to capture. Press and hold for 3 seconds to enable or disable recording.
- Mode button: Press to enter the main menu. Press and hold for 3 seconds to restore to default settings.
- Zoom button: Press for digital zoom. Press and hold for 3 seconds to measure range.

Port Description



The viewing interface and the main menu can display SD card status.

- White icon: SD card is correctly installed.
- Red icon: The memory of the SD card is full.
- Red icon with "X" mark: The SD card is not installed.
- Red icon with "!" mark: The SD card runs into fault. The interface displays formatting prompt.

Main Functions

Colorization

Different colorization modes display different effects.

Range Measurement

Marks the top and bottom of the target, and the interface automatically displays the distance of the target from the camera.

Hot Point Tracking

Detects and marks the highest and lowest temperature point.

Network

Supports network connection through the Wi-Fi. You can add Camera through mobile app to realize functions, such as capturing, recording and parameter configuration.

Storage

Built-in storage (up to 256 GB), supports recording and capturing.

Digital Zoom

Supports 1×, 2×, 3× and 4× digital zoom. The number might differ depending on devices.

Fire Warning

Track fires in real-time in the scene.

Laser Light

Turn on the light to indicate positions. Do not aim the light to eyes to avoid damages.

Automatic Suspend and Shutdown

Supports setting time of automatic suspend and shutdown.

Function Description

Charging

The screen will display battery information after the Camera starts. When the battery is low, charge the Camera timely to make sure the normal function.

- When charging the Camera, the temperature is required at 0 °C to 45 °C (32 °F to 113 °F). Otherwise the charging function will be automatically disabled.
- Charge the Camera with the USB data cable that comes with the delivery.

Step 1 Open the sealing cover of the USB port when charging.
Step 2 Connect the USB data cable to the USB port to charge the Camera.

- Alternate flash of red and green: Charging error.
- Solid red: Charging.
- Solid green: Full power.
- Off: Not connected to data cable to charge.

Menu Description

When the Camera is on, press to enter the main menu. Functions of all buttons are as follow.

- Press to move upward the cursor.
- Press to move downward the cursor.
- Press to confirm.
- Press to return.

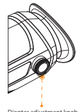
Image Adjustment

Diopter Adjustment

You can adjust the knob to fit your eyesight for clear images.

You must adjust the diopter for first-time use before configuring the functions.

Step 1 After powering on the Camera, remove the protective cover of the lens.
Step 2 Aim the lens at the target, and then put your eyes close to the eyeshade.
Step 3 Adjust clockwise or counterclockwise the rotary knob according to your eyesight.



Colorization

Different colorizations display different effects. On the main menu, press to select **Colorization**.

- White Hot: The objects with high temperature are white. The higher the temperature, the brighter the color.
- Alarm: The objects with high temperature are red. The objects can stand out.
- Iron Bow: The objects with high temperature are red. The higher the temperature, the brighter the color.
- Rainbow: The objects with different temperatures display different colors, creating a rainbow-like image.

Digital Zoom

Digital zoom helps to zoom in to view the image.
On the home page, press to realize this function. Digital number changes, and the image changes along.

External Display

The camera connects to PAL screen to zoom in and expand the output images for you to check the details. The description is for reference only, and might differ from the actual product.

The port of the screen is connected to the CVBS port of the Camera.

Step 1 On the main menu, press , and then select **Screen Mode**.
Step 2 Press , and then select **PAL**.
After the connection, the external screen will display the images from the Camera.

Range Measurement

Measure the range towards targets.

When measuring the range, keep your hand steady. Otherwise the accuracy might be affected.

Step 1 On the main menu, press , and then select **Ranging Mode**.
Step 2 Press to switch ranging modes. Press to save. You can select from **Rabbit**, **Wolf**, **Human** or **Customize**. The default heights of wolf, human and rabbit are 1.2 m, 1.8 m and 0.3 m respectively.

Step 3 Aim the lens to the target. Adjust the distance between the two green lines to make sure that the above line is aligned with the head of the target, and the below line is aligned with the bottom of the target. After the adjustment, the upper-left corner of the image will display the actual result.

Hot and Cold Point

Perform a real-time tracking for the points with the highest and lowest temperature. The description is for reference only, and might differ from the actual product.

Step 1 On the main menu, press , and then select **Hot Point**.

Step 2 Press to switch to **On**. Press to confirm.
The image will display the hot and cold point icons. The icons will automatically locate at the points with the highest and lowest temperature.

Buzzer

- **Buzzer**: Enter the main menu, and then select to turn on and off of the buzzer.
- **KeyBuzzer**: Enter the main menu, and then select to turn on and off of the keybuzzer.

Fire Warning

Perform a real-time tracking for fire in the scene. The description is for reference only, and might differ from the actual product.

Step 1 Press to enter the main menu.

Step 2 Press to set on and off of the fire warning.

Sensitivity can be selected from **High**, **Middle** and **Low**.

USB Mode

- Enter the main menu, select **USB Mode**, and then select **Mass**. You can use the Camera as a storage device.
- Enter the main menu, select **USB Mode**, and then select **UVC**. You can connect to the computer to view live images, live videos and live snapshots through the Client.
- Enter the main menu, select **USB Mode**, and then select **Off.** The Camera is charging.

Video and Snapshot

You can manually record videos or snapshots when the Camera is installed with SD card and is in the live view.

Recording

On the viewing interface, press and hold for 3 seconds to enable recording function. The OSD with flash on the screen and the recording time will display.
Press and hold again for 3 seconds to stop the recording. When the recording stops, the recording time will display normally.

Capturing

On the viewing page, press to capture.
The page will display an icon when the capturing succeeds.

Exporting File

Export the recording and capturing files.

- Connect the cables before the Camera is powered on. Do not hot swap the USB port of the Camera.
- Select **USB Mode** after connecting the Camera to the computer.

Step 1 Connect the Camera to the computer through USB data cable.
The driver will automatically be installed for first-time connection.

Step 2 Enter the disk of the computer, you can open the Camera disk at a mobile storage device.

Step 3 Select the export files and copy them to the computer.
- Capturing file: View through the specific computer Client.
- Recording file: Play through the specific computer Client.

Step 4 Disconnect the USB data cable with the computer.
After the connection between the Camera and the computer, images can be displayed on the Camera, but the functions of recording and capturing will not be available.

Wi-Fi Connection

After enabling Wi-Fi connection, you can connect your phone to the hotspot of the Camera, and then access the Camera with the app.

Some cameras will automatically disable the Wi-Fi function when the battery is lower than 15%.

Step 1 Scan the QR code with your phone to install the Client.

iOS Android

Step 2 Enable the Wi-Fi of the Camera on the main menu.

Step 3 Enable the Wi-Fi of your phone, and then connect to the hotspot of the Camera.
- Wi-Fi name: Model number + serial number.
- Wi-Fi password: The last 8 digits of the serial number.

The serial number can be found on the Camera and the label of the packing box.

Step 4 Log in to the app. The password is the last 8 digits of the serial number.
Add access devices according to the prompt.

Auto Suspend

Step 1 Press to enter the main menu.

Step 2 Select **Auto Suspend**.

Step 3 Press to set auto suspend time.

- Off: Disable the auto suspend.
- 1 Min: The Camera will automatically suspend and the screen will turn off in 1 minute.
- 3 Mins: The Camera will automatically suspend and the screen will turn off in 3 minutes.
- 5 Mins: The Camera will automatically suspend and the screen will turn off in 5 minutes.
- 10 Mins: The Camera will automatically suspend and the screen will turn off in 10 minutes.

Step 4 Press to finish the auto suspend settings.

When the Camera is in sleep, press the mode button, you can return to the main menu.

Auto Shutdown

Step 1 Press to enter the main menu.

Step 2 Select **Auto Shutdown**.

Step 3 Press to set the auto shutdown time.

- Off: Disable the Auto Shutdown.
- 1 min: The Camera will automatically shut down in 1 minute.
- 3 mins: The Camera will automatically shut down in 3 minutes.
- 10 mins: The Camera will automatically shut down in 10 minutes.
- 30 mins: The Camera will automatically shut down in 30 minutes.

Step 4 Press to finish the auto shutdown settings.

After finishing the auto shutdown settings, the Camera will suspend first, and then shutdown.

Safety Instructions

The following signal words might appear in the manual.

Signal words	Meaning
DANGER	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
WARNING	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, lower performance, or unpredictable result.
LASER RADIATION	Indicates a laser radiation hazard. Take care to avoid exposure to a laser beam.
	Provides additional information as a supplement to the text.

About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions.

For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.

- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the Camera.
If there is any uncertainty or controversy, we reserve the right of final explanation.

Important Safeguards and Warnings

Transportation Requirements

WARNING

- Transport the Camera within the allowed humidity and temperature conditions.
- Do not fall, squeeze, violently vibrate or immerse the device in liquid when transporting. Gently pick and place the Camera when moving, prevent the internal equipment becoming damaged or cable connection becoming loose.
- Do not transport the Camera without package. Use the factory default package or material of equal quality to pack the Camera when transporting it, otherwise the Camera can become easily damaged.

Storage Requirements

WARNING

- Store the Camera within the allowed humidity and temperature conditions.
- Do not place the device in a humid, dusty or extremely hot or cold site that has strong electromagnetic radiation or unstable illumination.
- Do not squeeze, violently vibrate or immerse the device in liquid.
- Do not mechanically vibrate or crash when storing.
- Store the Camera in a ventilated place that has no strong electromagnetic radiation.

Operation Requirements

DANGER

- Prevent liquid from flowing into the Camera to avoid damage to the internal components.
- Do not stuff foreign materials into the Camera to prevent a short circuit which could result in the Camera being damaged or people becoming injured.

CAUTION

- Do not dismantle the Camera. The internal components can only be repaired by a qualified professional. Dismantling it without professional assistance might cause water seeping in or might result in the Camera producing poor quality images.
- Operating temperature: -20 °C to +50 °C (-4 °F to +122 °F).

Maintenance and Repair Requirements

DANGER

- Prevent liquid from flowing into the Camera to avoid damage to the internal components. In case the liquid enters the Camera, immediately stop using the Camera, cut off the power, and disconnect all the cables, and then contact your local customer service center.
- Use the accessories regulated by the manufacturer. The Camera should be maintained by qualified professionals.
- Make sure to cut off the power before cleaning the Camera, to prevent electric shock.

WARNING

If the Camera malfunctions, contact your local customer service center. Do not dismantle the Camera.

CAUTION

- Clean the Camera body with a piece of soft dry cloth. For any dirt that is hard to remove, pick up a piece of clean and soft cloth, dip it into a little neutral detergent and gently wipe the dust away. After that, wipe away all the remaining liquid on the Camera with another dry cloth. Never use volatile solvents such as alcohol, benzene and thinner, or cleaners that are strong and abrasive. Otherwise, the Camera's surface coating will be damaged and its working performance will be encumbered.
- Save the factory package of the Camera. When the Camera malfunctions, pack the Camera with the factory package and send to the dealer.