GOYOJO®

# THERMAL
## IMAGING CAMERA

GH192/GH340

**GOYOJO® Thermal Imaging Camera**


**Manufactured by:**
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FACEBOOK  Official Website

MADE IN CHINA  RoHS

GOYOJO®

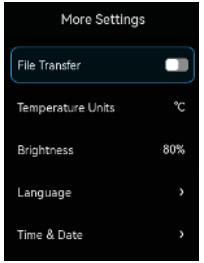
# THERMAL

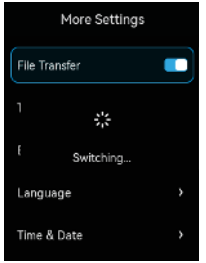
## IMAGING CAMERA

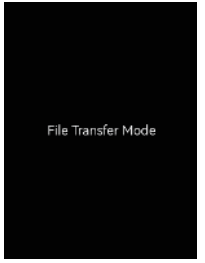
## Note: Export Photos

**The device connects to a computer via a Type-C cable, enabling the export of captured image files.**

**Step 1** Enter Main Menu → More Settings →File Transfer ON→File Transfer Mode



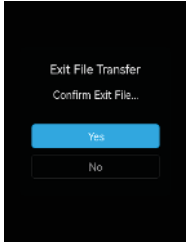

**Step 2** Open the Type-C port cover on the top of the device and connect the device to your computer using a Type-C cable.

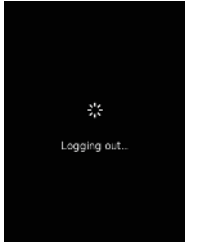
## Note: Export Photos

**Step 3** Result indication: When connected successfully, anicon appears in the status bar, and a removable disk icon appears on your computer.
Click to open the disk, navigate to the screenshot folder, select the desired files, copy them to your computer, and view them using image viewing software。

**Step 4** After copying is complete, using your device

Exit File Transfer → Logging out → Main Menu → Working Screen




**Step 5** Disconnect the Type-C cable.

## WARNING Please Read Before Use

- During the installation and use of the equipment, it is essential to strictly adhere to all national or regional electrical safety regulations. Use a power supply that is compatible and meets the SELV (Safety Extra-Low Voltage) requirements. For specific requirements regarding the power adapter, please refer to the product specification sheet.
- If the equipment is a laser device, do not direct the laser beam into the eyes to avoid potential eye injury; close proximity of the laser beam to flammable objects may pose a fire hazard, so maintain a safe distance during installation.
- After the laser light is activated, it is strictly prohibited to aim the laser at objects with strong reflective properties, such as glass or mirrors, to prevent laser reflection from damaging the thermal imaging sensor.
- Do not drop objects onto the device or subject it to strong vibrations. Keep the device away from locations with magnetic field interference. Avoid installing the device on surfaces that vibrate or are prone to impact.
- Do not aim the lens at strong heat sources, such as the sun or other high-temperature targets, to prevent

## WARNING Please Read Before Use

damage to the lens or thermal imaging detector.

- Do not use the product in extremely hot, cold, dusty, or high-humidity environments. Specific temperature and humidity requirements are detailed in the product's specification sheet.
- Store the device in a dry environment free from corrosive gases. Do not place the battery near heat sources or open flames, and avoid direct sunlight.
- Keep the device packaging materials in good condition so that you can use the original packaging to wrap the device and send it to the distributor or return it to the manufacturer for handling in case of any issues.
- If the equipment is not functioning properly, please contact the store where you purchased the equipment or the nearest service center. Do not disassemble or modify the equipment in any way. (The company shall not be liable for any issues arising from unauthorized modifications or repairs.)
- For equipment stored long-term, it should be powered on for inspection every six months, with each power-on duration of no less than 3 hours.

## WARNING Please Read Before Use

- If you connect the product to the internet, you do so at your own risk, including but not limited to the possibility of the product being subjected to cyber-attacks, hacking, virus infections, etc. Our company shall not be liable for any product malfunctions, data breaches, or other issues arising from such risks; however, we will promptly provide you with technical support related to the product.
- Connecting the device to the internet may expose it to cyber-security risks. Please strengthen the protection of your personal information and data security. If you discover any potential cyber-security vulnerabilities in the device, please contact us immediately.
- Please keep all original packaging materials for the device in good condition. In the event of any issues, use the packaging materials to properly package the device and send it to the service center for handling. The company shall not be liable for any accidental damage during transportation caused by the use of non-original packaging materials.

**Prioritize Safety, Follow Guidelines, And Extend Your Device' s Lifespan!**

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# 1.Product Description

## 1.1 Product Introduction

GOYOJO GH Series is suitable for building inspection, HVAC, and electrical applications. The intelligent image enhancement mode can effectively detect temperature changes and accurately measure the temperature of targets in the environment.

- **Multiple image-based temperature measurement modes:**
  Thermal imaging, fusion, and visible light modes can meet diverse application requirements across various scenarios.
- **IP54-rated** for use in various harsh environments, withstanding dust and rain.
- **Large-screen display:**
  2.8-inch LCD screen provides clearer temperature readings for comfortable viewing.
- **Photo function:**
  Supports manual photo capture and records temperature measurement data.
- **Temperature Measurement Function:**
  Continuously monitors the ambient temperature and displays the measurement results on the screen.
- **Palette:**
  Supports multiple palette options to display different visual effects.





## 1.2 Specifications

| Infrared | |
|---|---|
| Detector Type | Vanadium Oxide Uncooled Focal Plane Array |
| Infrared Sensor Resolution | GH192：96*96　GH340：256*192 |
| Super Resolution | GH192：240*240　GH340:640*480 |
| Die Size | 12μm |
| Frame Rate | 25HZ |
| NETD, mK | GH192：⩽50 mK@25°C, F/1.0　GH340：⩽40 mK@25°C, F/1.0 |
| FOV | GH192：56.8° *56.8°　GH340：50°* 37.2° |
| IFOV | GH192：8.89mrad　GH340：3.3mrad |

| Temperature Measurement | |
|---|---|
| Temperature Measurement Range | -20°C-550°C（Level A: -20°C -150°C / Level B:100°C -550°C） |
| Temperature Measurement Accuracy | ±2 °C or 2% of the reading, whichever is higher |
| Temperature Measurement Distance | 0.1m-50m |
| Emissivity | Default 0.95; refer to the table for emissivity adjustments |
| Temperature Measurement Features | Center point temperature, automatic high/low temperature |
| Temperature Measurement Alarm | Yes |
| Adjustable Smart Temperature Detection Range | Yes |
| Smart Temperature Highlight | Yes |
| Temperature Measurement Modes | Thermal imaging/Fusion/Visible light |
| Palette | 6, White hot/Black hot/Iron Red/Rainbow/Red hot/Fusion |





| Display | |
|---|---|
| Type | LCD |
| Dimensions | 2.8 Inches |
| Resolution | 240*320 |
| Digital Magnification | No |

| Additional Features | |
|---|---|
| Visible Light Camera | Yes, two-megapixel, fixed focus |
| Photo | Yes |
| Video&Audio | NO |
| Laser | NO |
| Fill Light | NO |

| Storage&Transmission | |
|---|---|
| Storage Capacity | 8GB |
| USB Port | Type-C |
| Bluetooth | No |
| WIFI | No |
| Real-time Screen Mirroring | No |

| Power | |
|---|---|
| Battery Type | Lithium Battery |
| Battery Capacities | 3.7V, 3500mAh |
| Operating Time | ⩾8H(GH192)/⩾6H(GH340) |
| Charging Time | 4H |
| Charging Specifications | 5V/1A |

| Physical | |
|---|---|
| Net Weight (Built-in Battery) | GH192:265.7g GH340: 277.7g |
| Dimensions | 223×65.6×67mm |
| IP Level | IP54 |
| Operating Temperature | -10°C-50°C,⩽95% |
| Storage Temperature | -40°C-70°C,⩽95% |
| Warranty | 1 Year |





## 1.3 Interface Introduction




❶ **Charging Indicator:**
Red light stays on during charging;
Green light stays on when fully charged.

❷ **Power Button:**
Hold On 3S:Press and hold for 3 seconds to turn the device on/off.
Main Screen Press: Enter the menu.
Menu Screen Press: Confirm or select.

❸ **Return Button:**
Return to the previous menu.

❹ **UP Button:**
Main Screen Press:Switch temperature-measuring mode.
Menu Screen Press:Up-select parameters or adjust parameters.




❺ **Down Button:**
Main Screen Press:Switch Palette.
Menu Screen Press:Down-select parameters or adjust parameters.

❻ **Display**

❼ **Tripod mount:**
For attaching a tripod (not included).

❽ **Trigger button:**
Menu Screen Press:Return to main screen.
Main Screen Press:Photo.

❾ **Visible Light Camera**

❿ **Thermal Imaging Camera**

⓫ **Charging Port**





# 2.Basic Operations

## 2.1 Charging

When using the device for the first time, please charge it first.

Lift the Type-C port cover on the top of the device. Connect one end of the data cable to the Type-C port and the other end to the adapter.

**Note**

After the device powers on, the battery level information is displayed in the upper-right corner of the screen.

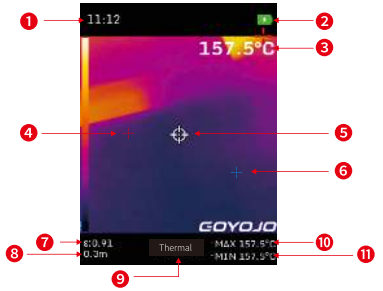
**Indicates full battery charge**

**Indicates low battery charge**

When the screen displays a low battery warning, it indicates that the device's battery power is insufficient. Please recharge promptly to avoid inaccurate measurement data and ensure the device functions properly.

## 2.2 Main Screen

After power on, Go to the main screen.




1. Time
2. Status Bar
3. Center Point Temperature
4. Highest Temperature Indicator
5. Center Point Temperature Indicator
6. Lowest Temperature Indicator
7. Distance
8. Emissivity
9. Temperature Measurement Mode
10. Highest Temperature
11. Lowest Temperature

**Note**

The device automatically performs image calibration at regular intervals. If the prompt "Calibrating..." appears at the bottom of the screen and you hear clicking sounds, it indicates the device is currently calibrating the image.





# 3.Image Display Adjustment

## 3.1 Switch Temperature-measuring Mode

**Main Screen Press:** Switch temperature-measuring mode.

**Thermal Mode:** Display thermal imaging images only.

**Visible Light Mode:** Display visible light images only.

**Fusion Mode:** Overlay visible light onto thermal imaging, preview the fused image, with sharper edges compared to thermal imaging mode.

## 3.2 Switch Color Palettes

**Main Screen Press:**

Switch Palette.(6,White hot/Black hot/Iron Red/Rainbow/Red hot/Fusion)

The device supports multiple color palettes.

Depending on the target temperature, the displayed image color changes to distinguish the target and enhance its visibility.

## 3.3 Set Temperature Highlights

By setting a highlight temperature, the image turns red when objects exceeding this threshold appear in the frame. Objects meeting the highlight criteria are highlighted in red, enabling rapid identification and detection of high-temperature targets.

**Step 1** Press power button,enter the menu.

**Step 2** Use the UP/DOWN button to select “Palette”.

**Step 3** Press the power button to switch modes and select “Temperature Highlight”.

Choose “High Temperature Highlight”, then use the up/down button to set the highlighted temperature.

**Step 4** Press the return button to exit.

## 3.4 Set The Temperature Range

Supports manual and automatic configuration of the temperature range for the highest and lowest temperatures in the observation scenario.

**Step 1** Press power button,enter the menu.

**Step 2** Use the UP/DOWN button to select “Temperature range”.





**Step 3** Press the power button to switch manual or automatic configuration.

**Auto:** The device automatically adjusts the temperature range within the observation scene.

**Manual:** Select “Upper Limit” or “Lower Limit.” Use the up/down button to adjust the maximum and minimum temperature parameters respectively.

**Step 4** Press the return button,save and exit.

## 3.5 OSD

The device supports displaying or hiding auxiliary information on the observation interface. Enabling this feature facilitates access to temperature readings, parameters, emissivity, and other data.

Navigate to “Settings→Display Settings” to select information to show or hide on the observation interface.

Press the power button to toggle display on or off.

**Parameters:** Distance, emissivity, and other parameter information. Default setting is off.

**Watermark:** Brand logo.

# 4.Temperature Measurement Configuration

## 4.1 Set Temperature Measurement Parameters

Temperature measurement parameters affect measurement accuracy.

Please configure the temperature measurement parameters first.

**Step 1** Press power button,enter the menu.

**Step 2** Use the UP/DOWN button to select the corresponding menu to configure the parameters.

**Emissivity:** Set the target's emissivity or parameters for rough/smooth surfaces. Select “Custom” to define custom emissivity values.

**Refer to the 9:** “Emissivity Table” for target emissivity lookup.

**Distance:** Set the distance between the target and the device.

**Unit:** Access “More Settings → Units” and press the power button to switch temperature measurement units.

**Temperature Range:** Indicates the device's supported temperature measurement range, with manual range selection and automatic switching available.

**Step 3** Press the return button,save and exit.





## 4.2 Display Temperature Information

Used to customize the temperature measurement information displayed on the observation interface.

The device defaults to displaying the highest temperature point, center temperature point, and lowest temperature point.

**Step 1** Press power button,enter the menu.

**Step 2** Use the UP/DOWN button to select “Display Settings”.

**Step 3** Select to display temperature measurement results as needed.

**Step 4** Press the return button,save and exit.

## 4.3 Set Temperature Alarm

The device triggers an alarm when an object in the frame triggers an alarm rule.

**Step 1** Press power button,enter the menu.

**Step 2** Use the UP/DOWN button to select “Temperature Alarm”.

**Step 3** Press the power button to select High temperature alarm/Low temperature alarm and enable it. Press the power button , then use the up/down button to set the alarm temperature.

**Step 4** Press the return button to exit.

> Note When a target triggers a temperature alarm, an alarm notification will appear at the top of the main screen.

# 5.Photo

## 5.1 Photo

Capture thermal imaging and visible light images, then mark and store the photographs.

To take a photo from the main screen interface, perform the following actions:

- Press and release the trigger button to capture the image.
- Photo capture is not supported when the device is connected to a computer.

## 5.2 View Album

**Step 1** Press power button,enter the menu.

**Step 2** Use the UP/DOWN button to select “Album”.





**Step 3** Select a screenshot file, press the power button to view the image.

**Press the power button :** Delete the image.

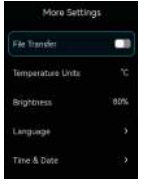
**Press the up/down button:** Switch between images.

**Press the return button :** Exit viewing.

## 5.3 Export Photos

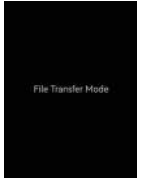
**The device connects to a computer via a Type-C cable, enabling the export of captured image files.**

**Step 1** Enter Main Menu → More Settings →File Transfer ON→File Transfer Mode









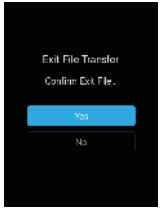
**Step 2** Open the Type-C port cover on the top of the device and connect the device to your computer using a Type-C cable.

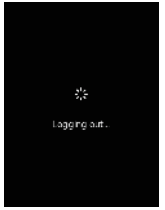
**Step 3** Result indication: When connected successfully, anicon appears in the status bar, and a removable disk icon appears on your computer.

Click to open the disk, navigate to the screenshot folder, select the desired files, copy them to your computer, and view them using image viewing software。

**Step 4** After copying is complete, using your device

Exit File Transfer → Logging out → Main Menu → Working Screen




**Step 5** Disconnect the Type-C cable.





Note When connecting the device to a computer for the first time, the driver will install automatically.
Do not disconnect the Type-C cable during the initial driver installation to preventdevice malfunction

# 6.System Parameter Configuration

## 6.1 Set The Time And Date

Press the power button, Go to “More Settings→ Time & Date” to set the device's time and date.

## 6.2 Set Automatic Shutdown

Press the power button, Go to “More Settings → Auto Shutdown” ,configure the device's automatic shutdown parameters.

When set to off, you must press and hold the power button to manually shut down the device. When set to a specific time, the device will automatically power off if no operation is performed within that timeframe.

### 6.3 Format Storage

The device features built-in storage for photos.

Formatting will delete all stored files. Please proceed with caution and back up important files beforehand.

**Step 1** Press the power button, Go to “More Settings→ Format Storage”.

**Step 2** Press the power button, Follow the menu instructions.

### 6.4 Restore Factory Settings

Restoring factory settings will reset all device parameters to their original state. Proceed with caution.

Press the power button, navigate to “More Settings→Restore Factory Settings”,and configure the parameters.

### 6.5 View Device Information

Press the power button,Go to “More Settings→ About Device” to view device information such as model, version, and serial number.





## 7. Transportation,Storage And Disposal

### Transportation

The supplied Li-ion batteries obey the Dangerous Goods Legislation requirements.

- Obey all applicable national regulations.
- Obey the special requirement on package and labels for commercial transportation, including by third parties and forwarding agents.

### Storage

- Keep the product in a dry,low-light,frost free space.
- When the product is not in use, promptly close the objective lens cover.

### Disposal

Follow local recycling requirements and applicable regulations.

# 8.Regulations And Certifications

## CE Certification

This product bears the CE Mark and is certified for legal sale in the European Economic Area (EEA).

**Declaration of Conformity**

GH series products complies with the essential requirements of the following European Directives and Standards: · **EN 55032:2015/A11:2020/A1:2020** · **EN 55035:2017/A11:2020**

## FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference.

This device must accept any interference received, including interference that may cause undesired operation.

Test Standards: · **FCC Part 15:2016**





## RoHS

**Restriction of Hazardous Substances**

GH series products conforms to Directive 2011/65/EU(RoHS 2) and its amendments, restricting the use of the following hazardous substances:

- Lead (Pb)
- Mercury (Hg)
- Cadmium (Cd)
- Hexavalent Chromium ($Cr^{6+}$)
- Polybrominated Biphenyls (PBB)
- Polybrominated Diphenyl Ethers (PBDE)

**Compliance Threshold:** ⩽ 0.1% (1000 ppm) by weight, except Cadmium (⩽ 0.01% or 100 ppm).

## 9.Emissivity Table

| Materials | Emissivity |
|---|---|
| Human Skin | 0.98 |
| Printed Circuit Board | 0.91 |
| Concrete | 0.95 |
| Ceramic | 0.92 |
| Rubber | 0.95 |
| Paint | 0.93 |
| Wood | 0.85 |
| Asphalt | 0.96 |

| Materials | Emissivity |
|---|---|
| Brick | 0.95 |
| Sand | 0.90 |
| Soil | 0.92 |
| Cotton | 0.98 |
| Cardboard | 0.90 |
| White Paper | 0.90 |
| Water | 0.96 |