Chiron LRF

User's Manual



Foreword

General

This manual introduces the functions and operations of Chiron LRF (hereinafter referred to as "the Camera"). Read carefully before using the device, and keep the manual safe for future reference.

Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
	Indicates a potential risk which, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable results.
ESD ESD	Electrostatic Sensitive Devices. Indicates a device that is sensitive to electrostatic discharge.
	Indicates dangerous high voltage. Take care to avoid coming into contact with electricity.
	Indicates a laser radiation hazard. Take care to avoid exposure to a laser beam.
© <u>∽∿</u> TIPS	Provides methods to help you solve a problem or save time.
	Provides additional information as a supplement to the text.

Revision History

Version	Revision Content	Release Time
V1.0.0	First release.	April 2024

Privacy Protection Notice

As the device user or data controller, you might collect the personal data of others such as their face, fingerprints, and license plate number. You need to be in compliance with your local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures which include but are not limited: Providing clear and visible identification to inform people of the existence of the surveillance area and provide required contact information.

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
 - L

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 device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

Important Safeguards and Warnings

This section introduces content covering the proper handling of the device, hazard prevention, and prevention of property damage. Read carefully before using the device, and comply with the guidelines when using it.

Transportation Requirements

- 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

- 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.
- For long-term storage of the battery, make sure that it is fully charged every half year to ensure the battery quality. Otherwise, damage may occur.

Operation Requirements

A 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.
- 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.
- Improper use or replacement of the battery may result in explosion hazard.
- Do not charge other battery types with the supplied charger. Confirm there is no flammable material within 2 m of the charger during charging.
- Make sure that 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.
- If smoke, odor, or noise arises from the device, immediately turn off the power, unplug the power cable, and contact the service center.



- 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: -30 °C to +55 °C (-22 °F to +121 °F), and the operating humidity shall be 95% or less.

Maintenance and Repair Requirements

Anger

- 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.

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



- 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.

A 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.

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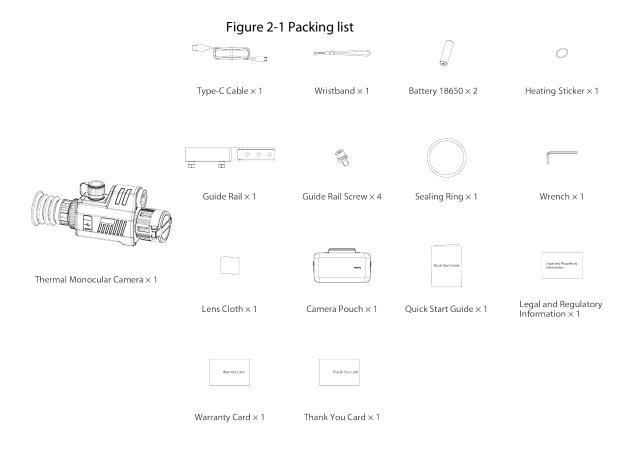
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1 Product Introduction

The thermal monocular camera captures sharp thermal imaging at a fast frame rate for smooth, impeccable vision on running targets and from moving vehicles. Designed to increase situational awareness at any time of day, the Camera can detect humans, animals, and objects in complete darkness, haze, or through glaring light, equipping law enforcement professionals, hunters, and outdoor enthusiasts with reliable thermal imaging in tough conditions. Featuring the laser range finder, the Camera can accurately measure the target distance. It is widely used in outdoor scenarios for hunting, animal observation, and more.

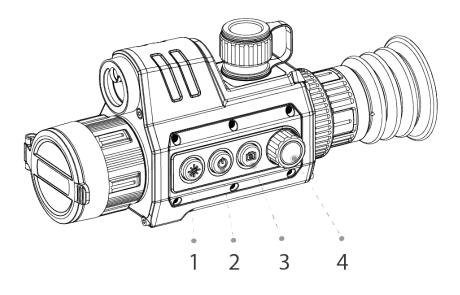
2 Structure

2.1 Packing List



2.2 Device Description

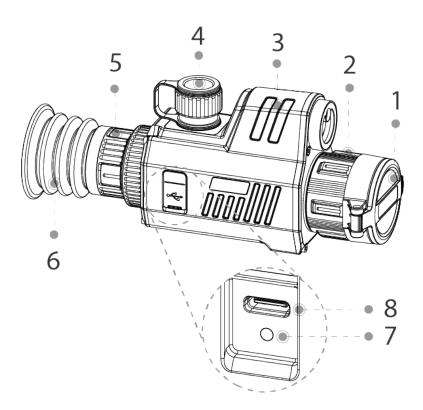
Figure 2-2 Button description



No.	Name	Description
1	Laser button	 Press to enable the laser ranging mode. DANGER 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. Make sure that you have set the laser ranging mode before enabling the function. For detail, see "3.3.3.7 Setting Laser Ranging". The ranging function is only available when the distance is longer than 10 m.
2	Power button	Press and hold to start or shut down the Camera.Double-press to enter the sleep mode.
3	Capture button	Press and hold to record videos.Press to capture images.
4	Menu/Zoom/FFC button	 Press and hold to go to the standard menu. Press to go to the brief menu. Rotate the button for digital zoom. Double-press to do the flat-field calibration for the image.

Table 2-1 Button description

Figure 2-3 Component description



No.	Name	Description
1	Protective cover	Dust prevention. Close the cover when not using the Camera.
2	Adjustable lens	Manually rotate the focusing ring to adjust the focus for a clear image.
3	Laser module	Measures the distance between the Camera and the target. DANGER 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.
4	Battery compartment	The place for holding the battery.
5	Diopter adjustment rotary knob	Adjust according to your eyesight.
6	Eyeshade	Protects the eyes from glare.
7	Charging indicator	 Red and green lights flashing alternately: charging error. Red light on: charging. Green light on: fully charged. Off: not connected to data cable to charge.
8	Type-C port	 Connects to a data cable for charging. Connects the Camera to a smart phone to view live images through the app. Connects to the Camera to a computer for exporting files.

Table 2-2 Component description

3 Basic Operation

3.1 Starting and Shutdown

3.1.1 Manual Starting and Shutdown

Press and hold (1) to start or shut down the Camera; double-press (1) to suspend the Camera.

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After starting the Camera, remove the protective cover of the lens.

- When the Camera is off, press and hold (1) to start it.
- When the Camera is on, press and hold (1) to shut down it.
- When the Camera is on, double-press (1) to suspend the Camera.
- When the Camera is in suspend mode, press (1) to weak up it.

3.1.2 Auto Shutdown

- <u>Step 1</u> Press and hold 🔘 to go to the standard menu.
- Step 2 Rotate 🔘 to select 🙆.
- Step 3 Press O to go to the **System Setting** configuration screen.
- <u>Step 4</u> Rotate 🔘 to select 😃.
- Step 5 Press O to set the auto shutdown time.
 If there is no operation in the configured time, the Camera will automatically shut down.

3.2 Image Adjustment

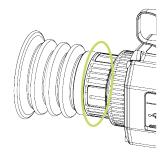
3.2.1 Adjusting Diopter

To get clear images, rotate the diopter knob to fit your eyesight.

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For the first-time use, adjust the diopter before configuring the functions.

- <u>Step 1</u> Aim the lens at the target, and then make your eyes close to the eyeshade.
- <u>Step 2</u> Adjust clockwise or counterclockwise the eyepiece to your eyesight.



3.2.2 Adjusting Focus

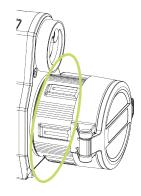
Manually rotate the focusing ring to adjust the focus for a clear image.

- <u>Step 1</u> Aim the thermal lens to the target.
- <u>Step 2</u> Adjust clockwise or counterclockwise the focusing ring until the view is clear.



During the adjustment, do not touch the lens to avoid smudging it; otherwise it may affect the image quality.





3.2.3 Setting Color Palettes

Select the color palettes, which adds color to the thermal image and uses color to indicate the temperature.

- <u>Step 1</u> Press 🔘 to go the brief menu.
- <u>Step 2</u> Press 🔘 to select 🚱.
- <u>Step 3</u> Rotate O to select the color palettes.
 - White Hot (WH): The objects with high temperature are white. The higher the temperature, the brighter the color.
 - Sepia (SP): The objects with high temperature are amber. The higher the temperature, the brighter the color.
 - Green Hot (GH): The objects with high temperature are green. The higher the temperature, the brighter the color.
 - Alarm (AM): The objects with high temperature are red. The objects can stand out.
 - Iron Red (IR): The objects with high temperature are red. The higher the temperature,

the brighter the color.

• Black Hot (BH): The objects with high temperature are black. The higher the temperature, the darker the color.



Figure 3-3 White hot

Figure 3-4 Sepia



Figure 3-5 Green hot



Figure 3-6 Alarm



Figure 3-7 Iron red



Figure 3-8 Black hot



3.2.4 Setting Digital Zoom

Digital zoom helps to zoom in the image.

On the viewing screen, rotate 🔘 to do digital zoom, and the image changes.

3.2.5 Setting Screen Brightness

Adjusts the overall screen brightness. The higher the level is, the brighter the screen will be.

<u>Step 1</u> Press 🔘 to go to the brief menu.

	You can also press and hold 🔘 to go to the standard menu.
<u>Step 2</u>	Press 🔘 to select 🔅
<u>Step 3</u>	Rotate 🔘 to set the brightness level. The higher the level is, the brighter the screen will
	be.

3.2.6 Setting Image Brightness

Adjusts the image brightness. The higher the level is, the brighter the screen will be.

- <u>Step 1</u> Press and hold 🔘 to go to the standard menu.
- Step 2 Rotate 🔘 to select 🔆.
- Step 3 Press O to set the brightness level. The higher the level is, the brighter the image will be.

3.2.7 Setting Contrast

Adjusts the contrast of the picture. The higher the level is, the more the contrast will be between bright and dark areas.

<u>Step 1</u> Press 🔘 to go to the brief menu.



You can also press and hold \bigcirc to go to the standard menu.

<u>Step 2</u> Press to select **(**).

<u>Step 3</u> Rotate to set the contrast level. The higher the level is, the more the contrast will be between bright and dark areas.

3.2.8 Setting Sharpness

<u>Step 1</u> Press 🔘 to go to the brief menu.

 \square

You can also press and hold \bigcirc to go to the standard menu.

<u>Step 2</u> Press 🔘 to select 🔼.

<u>Step 3</u> Rotate O to set the sharpness level. The higher the level is, the clearer the picture edges will be.

3.2.9 Setting Status Bar

- <u>Step 1</u> Press hold () to go to the standard menu.
- <u>Step 2</u> Rotate \bigcirc to select \bigcirc > **OSD**.

Step 3 Press () to enable OSD, and the status bar is displayed.

lcon	Name	Description
r S	Wi-Fi	 W: The Wi-Fi function is disabled. The Wi-Fi function is enabled.
IX	Digital zoom	Supports 1×, 2×, 4× and 8× digital zoom. The number might different depending on models.
	Battery level (built- in)	Displays the battery (built-in) level in real time.
D	Battery level (dry cell)	Displays the battery (dry cell) level in real time.

Table 3-1 Description of status bar

3.3 Configuring the Camera

3.3.1 Menu Description

When the Camera is on, press and hold () to go to the standard menu. Functions of all buttons are as follows.

- Rotate 🔘 to move upward or downward the cursor.
- Press O to set the parameters and confirm.
- Press and hold O or press O to exit.

3.3.2 Brief Menu

Press () to go to the brief menu. You can set color palettes, brightness, contrast, and select the zeroing profile.

<u>Step 1</u> Press O to go to the brief menu.

Figure 5-9 biter menu		
Image: second	B3–50	@ []₀⊞ B
	20	023-04-22 18:13

Figure 3-9 Brief menu

<u>Step 2</u> Press O to select the parameters to be configured.

Table 3-	2 Brief	menu
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Parameters	Description
Color palettes 🛞	Rotate 🔘 to select the color palettes, which adds color to the thermal image and uses color to indicate the temperature.
Contrast (🔘)	Rotate 🔘 to select the contrast level.
Brightness (🔅)	Rotate 🔘 to select the brightness level.
Sharpness (🔼)	Rotate 🔘 to select the brightness level.
Sharpness (Rotate () to select the brightness level.

<u>Step 3</u> Press and hold () to exit and save the configuration.

3.3.3 Standard Menu

3.3.3.1 Setting Forest Mode

- <u>Step 1</u> Press and hold \bigcirc to go to the standard menu.
- <u>Step 2</u> Rotate 🔘 to select 🙆.
- <u>Step 3</u> Press O to enable or disable the forest mode.
 - ON: Forest mode. Stands out the targets with high temperature, which makes it easier to find out the targets.
 - OFF: Standard mode. Used for daily observation.

3.3.3.2 Setting Zeroing Profile

Prerequisites

Before setting zeroing profile, make sure that you have configured zeroing in **Zeroing**. For details, see "3.3.3.3 Setting Zeroing".

Procedure

- <u>Step 1</u> Press and hold \bigcirc to go to the standard menu.
- Step 2 Rotate 🔘 to select 😂.
- <u>Step 3</u> Press O to select the zeroing profile as needed.

The Camera supports multiple zeroing profiles.

3.3.3.3 Setting Zeroing

Prerequisites

Before setting zeroing, make sure that you have selected the zeroing group in **Zeroing Profile**. For details, see "3.3.3.2 Setting Zeroing Profile".

Procedure

<u>Step 1</u> Press and hold \bigcirc to go to the standard menu.

 $[\]square$

- <u>Step 2</u> Rotate 🔘 to select 🚳.
- <u>Step 3</u> Press O to go to the zeroing configuration screen.
- <u>Step 4</u> Rotate O to select the parameters to be configured.
 - Reticle No. (三): Press 🔘 to select a number as the reticle number.
 - Type (Press) to select the reticle type.
 - \square

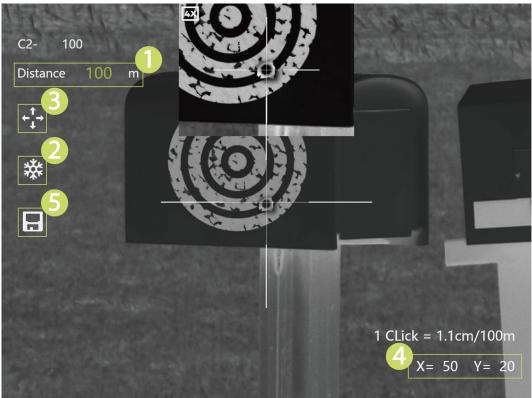
The Camera supports multiple reticles.

- Color (②): Press ③ select the reticle color from White, Red, Green.
- Distance 🕢: Press 🔘 to select the distance between the target and the Camera.
- Step 5 Adjust the reticle.

When the cursor is offset, select $\begin{array}{c} \begin{array}{c} \end{array} \end{array}$ and then press $\begin{array}{c} \end{array}$ to go to the reticle adjustment screen.

- 1) Set the distance. Press (), and the **Distance Setting** screen is displayed.
 - Rotate 🔘 to set the value.
 - Press 🔘 to switch the digits.
 - Press and hold 🔘 to exit and save the configuration.
- 2) After shooting at the target, select 💸 and then press 🔘 to freeze the image.
- 3) Select \mathbf{P} , and then press \bigcirc to select X-axis and Y-axis.
- 4) Rotate 🔘 to move the reticle to the shooting point, and then press 🔘.
- 5) Rotate Oto select 🖪, and then press O to save the configuration.

Figure 3-10 Adjust the reticle



3.3.3.4 Setting PIP

After enabling PIP, the target with the reticle can be magnified in the OSD image, which offers a closer view of the target with the whole visual scene.

- <u>Step 1</u> Press and hold 🔘 to go to the standard menu.
- <u>Step 2</u> Rotate 🔘 to select 回.
- <u>Step 3</u> Press O to enable or disable PIP.
 - On: An OSD image is displayed on the screen, and the target with the reticle can be magnified in the OSD image.
 - Off: Disable the PIP.

3.3.3.5 Setting Hot Point

Tracks the point with the highest temperature in real time.

- <u>Step 1</u> Press and hold 🔘 to go to the standard menu.
- Step 2 Rotate 🔘 to select 🕂
- <u>Step 3</u> Press O to enable or disable the hot point.

After enabling the hot point, the hot point icon will automatically locate at the points with the highest temperature in the image.

3.3.3.6 Setting 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.

The frequency bands and modes and the nominal limits of transmitted power (radiated and/or conducted) applicable to this radio device are the following:

Wi-Fi 2.4 GHz (2.4 GHz to 2.4835 GHz) 20 dBm
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Some cameras will automatically disable the Wi-Fi function when the battery level is lower than 15%.

Figure 3-11 QR code

<u>Step 1</u> Scan the QR code with your smart phone to install the app.





- <u>Step 2</u> Press and hold O to go to the standard menu.
- Step 3 Rotate 🔘 to select 🛜.
- <u>Step 4</u> Press 🔘 to enable the Wi-Fi function.

- Wi-Fi name: Model number + serial number.
- Wi-Fi password: 12345678.
- <u>Step 5</u> Log in to the app.

Add access devices according to the prompt.

Related Operations

- Change the password
 - 1. On the main menu, rotate \bigcirc to select \bigodot .
 - 2. Press 🔘 to go to the **System Settings** configuration screen.
 - 3. Select 🕋 > 🔂.
 - 4. Press 🔘 to go to the password set screen.
 - 5. Press \bigcirc to select the digital to be set, and then rotate \bigcirc to set the value.
- Reset the password
 - 1. On the main menu, rotate \bigcirc to select \bigodot .
 - 2. Press 🔘 to go to the **System Settings** configuration screen.
 - 3. Select 🐔 > 銜.
 - 4. Press 🔘 to reset the password.

3.3.3.7 Setting Laser Ranging

A DANGER

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.

3.3.3.7.1 Measurement Considerations

Measurement targets

The Camera is suitable for measuring the distance between the camera and the targets with high reflectivity (such as road signs on highways), the targets with moderate reflectivity (such as wall) and the targets with low reflectivity (such as tree, golf flag, utility pole, and animal). When the reflectance is reduced to a certain extent, the range will be reduced accordingly.

Factors that influence ranging capability

- Target reflectivity: Generally, the higher the reflectivity of the target, the better the ranging ability. For example, the measuring range of the Camera is 1,500 m for a target with moderate reflectivity, which can be up to 1,800 m for a target with high reflectivity, and 600 m for the targets with low reflectivity. (It might fail to measure the target that hardly generates diffuse reflection, such as water surface.)
- Target shape: When a target is too small or uneven, the ranging ability will decrease.
- Measuring angle: The measurement is more accurate when the reflection surface of target is vertical to the laser emission's direction. If you use the Camera under some extreme conditions, the measurement might be inaccurate.
- Measuring environment: The environment factors include sunshine intensity, the concentration of water vapor in the air and suspended particles (such as rain, fog, snow, fog and haze).

The range ability of the Camera defined under the following conditions:

- The measurement target is with moderate reflectivity, such as walls.
- The reflection surface of target is vertical to laser emission direction.
- The weather condition is sunny but not under the condition of direct sunlight.
- The reflection area is larger than $2 \text{ m} \times 2 \text{ m}$.

3.3.3.7.2 Setting Laser Ranging Mode

After setting the laser ranging mode, the Camera can measure the range towards targets.

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To guarantee the measurement accuracy, keep your hand steady when measuring the range.

<u>Step 1</u> Press and hold O to go to the standard menu.

Step 2 Rotate 🔘 to select 럚.

- <u>Step 3</u> Press O to select the laser ranging mode.
 - Once: After pressing the laser button, the Camera measures the distance between the camera and the target once.
 - Continue: After pressing the laser button, the Camera continuously measures the distance between the Camera and the target in 15 s.

3.3.3.8 Setting Smart Ballistics

Prerequisites

Before setting smart ballistics, make sure that you have configured zeroing in **Zeroing**. For details, see "3.3.3.3 Setting Zeroing".

Procedure

<u>Step 1</u> Press and hold O to go to the standard menu.

<u>Step 2</u> Rotate \bigcirc to select \bigodot .

- <u>Step 3</u> Press O to set smart ballistics.
 - Press 🐼 to enable or disable smart ballistics.
 - ON: Enable the smart ballistics function. The Camera can calculate the landing point of the bullet automatically according to configured parameters.
 - Select **Once** as the laser ranging mode, and then press the laser button, the landing point of the bullet is displayed on the reticle based on the single ranging result.
 - Select **Continue** as the laser ranging mode, and the press the laser button, the Camera continuously measures the distance. Press the laser button again to confirm the measuring result, and landing point of the bullet is displayed on the reticle.
 - OFF: Disable the smart ballistics function. The Camera will not calculate the landing point of the bullet.
 - Press 🛞 to set the parameters.
 - 1. Rotate 🔘 to select the parameter to be configured.
 - 2. Press () to go to the configuration screen.

3. Rotate 🔘 to set the value.

	Table 3-3 Parameters	of ballistic calculations
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Parameters	Description
Ballistic Profile	Displays the zeroing profile that you selected in"3.3.3.2 Setting Zeroing Profile".
Zero Range	Displays the distance that you configured in "3.3.3.3 Setting Zeroing".
Init Velocity	Enter the value according to the actual situation.
Altitude	The altitude of the current location.
Temperature	The current ambient temperature.
Ballistic Coefficient	Enter the value according to the actual situation.
Sight Height	The distance from the muzzle axis to the camera axis. The distance from the muzzle axis to the camera axis

4. Press and hold 🔘 to save the configuration.

Figure 3-12 Calculation result (target distance \leq configured distance)





Figure 3-13 Calculation result (target distance = configured distance)

Figure 3-14 Calculation result (target distance ≥ configured distance)



3.3.3.9 Function Settings

- <u>Step 1</u> Press and hold O to go to the standard menu.
- Step 2 Rotate 🔘 to select 🔡.
- <u>Step 3</u> Press O to go to the **Function** screen..

<u>Step 4</u> Rotate O to select function to be configured.

Table 3-4 Function settings

Function	Description
Compass (🔕)	Press 🔘 enable the Compass function, and the location information is displayed on the screen.
Compass Init (🙏)	Press () to initialize the location. In 15 s, rotate the scope along the three axes indicated by the icon, with each axis rotating at least 360°. After 15 s, the calibration completes automatically and exit to the main menu.
Burning Warning (🙆)	Press () to enable the burning warning function. When the lens is in the risk of burning, a note will be displayed on the screen and the shutter will be off automatically.
Logo (PIX)	Press \bigcirc to enable logo display, and the logo will be display on the left lower corner of the screen.
OSD (OSD)	Press 🔘 to enable OSD display, and the status bar is displayed.
FFC Mode 💿	Press () to select the FFC (Flat-Field Calibration) mode from Auto and Manual . For details, see "3.3.3.10 Setting FFC Mode".
DPC (🔣)	Press () to enable DPC (Defective Pixels Correction), and then you can correct the defective pixels in the image. For details, see "3.3.3.11 Setting DPC".
Auto REC (💷)	When the impact sensor of the Camera detects impact, it will automatically record the video, recording the wonderful moment of hunting. For details, see "3.4.1.1 Auto Recording".
МІС (⊉)	 Press O to enable or disable the microphone. On: The videos are recorded with sound. Off: The videos are recorded without sound.

3.3.3.10 Setting FFC Mode

With FFC (Flat-Field Calibration), the thermal image can be optimized, and you can easily find out temperature changes.

- <u>Step 1</u> Press and hold O to go to the standard menu.
- <u>Step 2</u> Rotate \bigcirc to select $\boxplus > \bigodot$.
- <u>Step 3</u> Press O to select the FFC mode.
 - Auto: The camera calibrates image automatically every certain period.
 - Manual: On the viewing screen, double-press 🔘 to manually calibrate the image.

3.3.3.11 Setting DPC

After enabling DPC (Defective Pixels Correction), you can correct the defective pixels in the image.

- <u>Step 1</u> Press and hold O to go to the standard menu.
- <u>Step 2</u> Rotate \bigcirc to select $\blacksquare > \blacksquare$.
- <u>Step 3</u> Press O to go to the FFC mode configuration screen.
- <u>Step 4</u> Rotate O to select the FFC mode.
 - Auto: The Camera automatically corrects the defective pixels in the image.
 - Manual: The Camera automatically corrects the defective pixels in the image.
 - 1. Press O to select X-axis and Y-axis.
 - 2. Rotate () to make the cursor coincide with the defective pixel.
 - 3. Press and hold 🔘 to save the configuration.

```
\square
```

The center of the cursor is the position of the defective pixel.

• Restore: The DPC configuration is restored to the primary state.

3.3.3.12 System Settings

- <u>Step 1</u> Press and hold 🔘 to go to the standard menu.
- Step 2 Rotate 🔘 to select 🙆.
- <u>Step 3</u> Press O to go to the **System Setting** screen..
- <u>Step 4</u> Rotate 🔘 to select the parameter to be configured.

Table 3-5 System settings

Parameter	Description
Auto Standby	Press 🔘 to set the auto standby time. The Camera will automatically standby in the configured time.
Auto Shutdown	Press 🔘 to set the auto shutdown time. For details, see "3.1.2 Auto Shutdown".
	Press 🔘 to select the USB mode.
USB Mode	 ON: The Camera can be used as a storage device.
	OFF: Charge the Camera.
Language	Press 🔘 to select the language as needed.
Unit	Press 🔘 to select the unite from m and yd .
Version	Press 🔘 to view the device information
Restore Default	Press 🔘 to restore the parameters to the defaults.
Time Set	Press \bigcirc to select the time to be configured; Press \bigcirc to select year, month, day, hour or minute, an then rotate \bigcirc to set the value.

Parameter	Description
Time Display	Press 🔘 to display the time.
	 Time: The time is displayed on the lower right corner of the screen.
	 Date&Time: The date and time is displayed on the lower right corner of the screen.
	 OFF: The date and time is not displayed on the screen.

3.4 Video and Snapshot

3.4.1 Recording Videos

3.4.1.1 Auto Recording

When the impact sensor of the Camera detects impact, it will automatically record the video, recording the wonderful moment of hunting.

- <u>Step 1</u> Press and hold 🔘 to go to the standard menu.
- <u>Step 2</u> Rotate \bigcirc to select \blacksquare > \blacksquare .
- <u>Step 3</u> Press to enable or disable **Auto REC**.
 - On: The Camera will record videos when the impact sensor of the Camera detects impact.
 - Off: The Camera will not record videos any time.

3.4.1.2 Recording Videos

On the viewing screen, press and hold (a) for 3 seconds to start recording a video. The green icon and the recording time is display.

Press and hold () again for 3 seconds to stop the recording. When the recording stops, the recording time will display normally.

3.4.2 Capturing Images

On the viewing screen, press (2) to capture images. The screen will display an icon when the capturing succeeds.

3.4.3 Exporting File

Exports the recorded and captured files.

<u>Step 1</u> Connect the Camera to the computer through Type-C data cable. The driver will automatically be installed for first-time connection.

- Connect the cables before starting the Camera. Do not hot swap the Type-C port of the Camera.
- Enable USB mode on the **USB Mode** configuration screen after connecting the Camera to the computer.
- <u>Step 2</u> On the computer desktop, double-click **My Computer**, and then open the Camera disk at a mobile storage device.
- Step 3Select the files to export and copy them to the computer.The specific computer client is required for playing the exported files.
- <u>Step 4</u> Disconnect the Type-C data cable with the computer.
 After connecting the Camera to the computer, images can be displayed on the Camera, but the functions of recording and capturing will not be available.

3.5 Power Supply

You can supply power to the Camera through the rechargeable battery coming with the Camera or charging with the Type-C cable.

3.5.1 Installing the Battery

- <u>Step 1</u> Open the cover of the battery compartment.
- <u>Step 2</u> Put one battery into the battery compartment.

\square

Make sure that the battery is installed with the positive electrode downward.

Step 3 Tighten the cover.

3.5.2 Charging

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

- During charging, keep the battery temperature 0 °C to +60 °C (+32 °F to +140 °F).
- Charge the Camera with the data cable that comes with the delivery.
- <u>Step 1</u> Open the sealing cover of the port when charging.
- <u>Step 2</u> Connect the Type-C cable to the port to charge the Camera.

The charging indicator states:

- Red and green lights flashing alternately: charging error.
- Red light on: charging.
- Green light on: fully charged.
- Off: not connected to data cable to charge.

3.6 Installing Guide Rail

Prerequisites

Before installing the guide rail, shut down the Camera and clean the bracket and guide rail with clean cloth.

Procedure

- <u>Step 1</u> Fix the Camera on the guide rail with the fixed screws.
- <u>Step 2</u> Tighten the knobs of the guide rail.

Figure 3-15 Install guide rail



4 System Update

Update the Camera manually or through the app.

4.1 Upgrading Manually

- <u>Step 1</u> Press and hold O to go to the standard menu.
- Step 2 Rotate 🔘 to select 🙆.
- <u>Step 3</u> Press O to go to the **System Setting** configuration screen.
- Step 4 Rotate 🔘 to select 🛅.
- <u>Step 5</u> Press O to enable USB mode.
- <u>Step 6</u> Copy the upgrading file (.bin).
- Step 7 Restart the Camera.

4.2 Upgrading through App

When the app detects new program for upgrading, it will prompt a notification. Tap **Upgrade** to upgrade the system.

Appendix 1 Compliance Notice

The thermal series products might be subject to export controls in various countries or regions, including without limitation, the United States, European Union, United Kingdom and/or other member countries of the Wassenaar Arrangement. Please consult your professional legal or compliance expert or local government authorities for any necessary export license requirements if you intend to transfer, export, re-export the thermal series products between different countries.