

# PARD

Thermal Imaging Monocular  
**Leopard 640 eX**



## User Manual



# Important Reminder

**1** All PARD products are exclusively designed for civilian use and strictly prohibited for any military purposes.

**2** All PARD products are not authorized for export to, including but not limited to Russia, Belarus, Palestine, Israel, Sudan, South Sudan, and other conflict zones.

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## Introduction

Thank you for your continued support and for choosing PARD Leopard thermal imaging monocular. Please read this manual carefully before using the device for the first time. Please follow the instructions in this manual to avoid any damage caused by improper use and to ensure that your device operates properly.

After reading, please keep this manual in a safe place, for future reference. This manual provides step-by-step instructions on how to use your digital device and is intended for your reference only.

Please note that PARD reserves the right to update this manual without prior individual notifications. For the latest information and updates, we recommend you to visit our official website. Additionally, PARD reserves the final right of interpretation of this manual.

## Precautions

- Please turn off the device and remove the battery when it's not in use for more than 10 days, and store the device & battery in a dry and safe place.
- Be extra cautious and handle the device with care during use or transportation. It is recommended to use the original packaging during transportation.
- Do not use the device to focus directly on strong sources of light such as the sun or electric welding. The detector may be damaged and it will void the warranty.
- Avoid lens scratches and damage caused by oil or chemical contamination of the lens. Keep the lens cap on when not in use.
- The device should be placed in a cool, dry, and ventilated environment without strong electromagnetic fields, and the storage environment temperature should not be lower than (-30°C/-22°F) or higher than (55°C/131°F).
- Do not disassemble the device without authorization. If you encounter any problems, please contact our after-sales team. Failure to do so will render the warranty service null and void.
- **Attention!** All PARD night-vision and thermal imaging devices require a license when exported to outside your country.

## Package Contents

Icon	Contents	Quantity
1	Leopard 640 eX	1
2	Type-C cable	1
3	Extra Rechargeable Lithium-ion Battery	1
4	User's manual	1
5	After-sales card	1
6	Lanyard	1

## Description & Key Features

The Leopard 640eX is the most advanced thermal binocular from PARD. It is compact and lightweight, comfortable to hold with one hand.

The top-mounted focus and zoom rings are smoothly accessible for both left- and right-handed users, making it ideal for extended stalking or scanning sessions.

A high-performance 640×512 thermal sensor delivers sharp, detailed images even in rain, fog, or complete darkness, enabling fast and reliable target identification in real hunting conditions.

The built-in 1,000 m laser rangefinder, combined with a high-resolution OLED display, provides accurate distance measurement, helping hunters make quicker and more confident decisions in the field.

### Key Features

- NETD<=14mK
- Sensor resolution 640\*512
- 3 Scene mode
- 6 Image mode
- HOT Track
- Wheel focus and zoom
- Compact design
- 1000m/1200yds LRF
- Photo & Video recording
- WiFi connection
- IP67 rating
- Firmware update

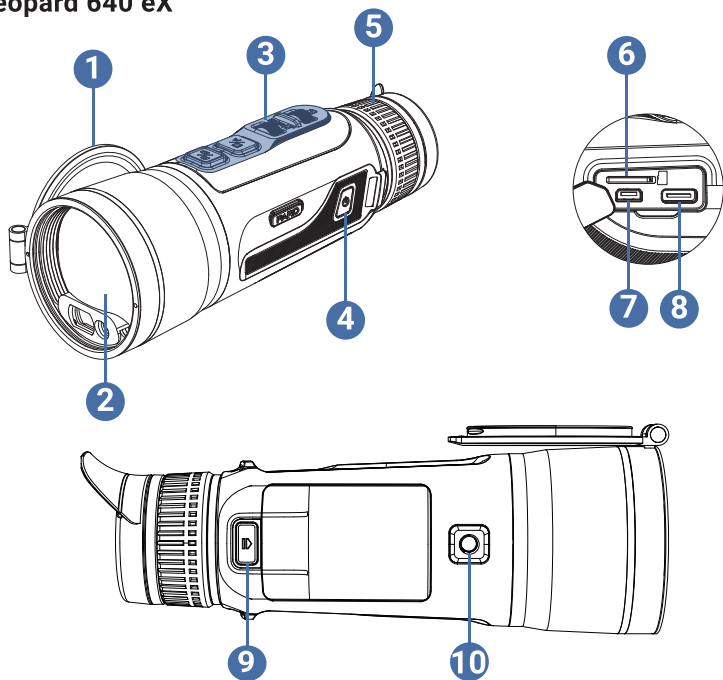
# Specifications

Model		Leopard 640 eX
Sensor		
Type	Uncooled VOx (vanadium oxide)	
Resolution(pixel)	640*512	
Pixel Size(μm)	12*12	
Sensitivity	≤14mK (0.014°C)	
Frame Rate(Hz)	50	
Detection Distance(m)	1800/2600	
Optics		
Objective Lens(mm)	35/50	
Optical Magnification(x)	2.6/3.7	
Digital Zoom(x)	2/4/6/8	
Field of view(°)	Horizontal	12.5/8.8
	Vertical	10/7
	Diagonal	16/11.2
Field of view (m @100m)	Horizontal	21.9/15.4
	Vertical	17.6/12.3
Focus range	5m-∞	
Eye Relief(mm)	20	
Diopter adjustment(D)	±5D	
Display		
Type	OLED	
Resolution(pixel)	2560*2560	
Video&Photo		
Photo Resolution(pixel)	1280*1280	
Photo Format	.JPG	
Video Resolution(pixel)	1280*1280	

<b>Video Format</b>	.mp4
<b>Main function</b>	
<b>LRF/m</b>	1000
<b>Compass</b>	Yes
<b>PIP</b>	Yes
<b>Auto recording</b>	Yes
<b>Loop recording</b>	Yes
<b>Time stamp</b>	Yes
<b>Record audio</b>	Yes
<b>Storage(GB)</b>	Micro SD card (Max. 128GB)
<b>Connections</b>	
<b>USB Type-C</b>	Yes
<b>WiFi</b>	Yes
<b>Supported Apps</b>	PardVision2
<b>Power Supply</b>	
<b>Battery Type</b>	5000mAh Special battery package
<b>Output Voltage(V)</b>	3.7
<b>Operating time(h,max)</b>	≤7h
<b>External power supply</b>	Type-C
<b>Material</b>	
<b>Housing</b>	Aluminium Alloy
<b>Objective lens</b>	All-glass multi-coated lens
<b>Measurement</b>	
<b>Product dimension(L x W x H, mm)</b>	207*75*65
<b>N.W/pcs(with battery, g)</b>	650.5

## Components

### Leopard 640 eX



No.	Name	No.	Name
①	Lens Cap	⑥	Micro SD Card Slot
②	Objective Lens and LRF Module	⑦	HDMI Port
③	Functional Button Pad	⑧	Type-C Port
④	Power Button	⑨	Battery Compartment Button
⑤	Diopter Adjustment Wheel	⑩	Tripod Slot

## 1. Battery Installation

The battery installation steps are as follows:

- 1.1 Press the battery compartment button to open the battery compartment and remove the battery.
- 1.2 Install the battery with correct direction.

## 2. Power ON/OFF and Sleep Mode

Diopter focusing is used to clearly see the content displayed on the screen.

- 2.1 You can press and hold the Power Button to for 3 seconds to power on/off the device(when the PARD Logo appears on the screen).
- 2.2 Please note that the image may not be clearly visible before objective lens focus adjusted, only the words and icons on the display are clearly visible at this stage.

## 3. Objective Lens Focusing

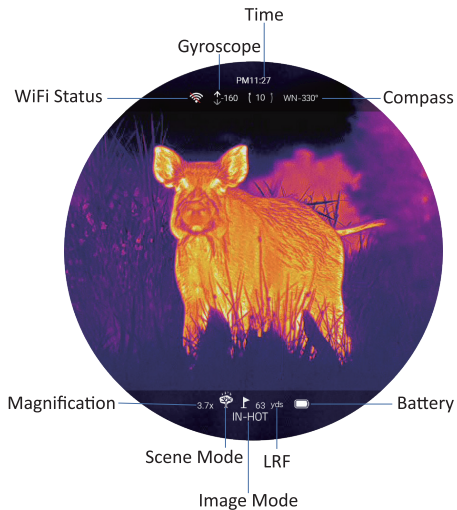
- 3.1 Before you focus the objective lens, ensure that the diopter focusing has been completed.
- 3.2 Aim at the target you want to see, and rotate the focusing wheel of the objective lens until you can see the target clearly.

## 4. Compass Calibration

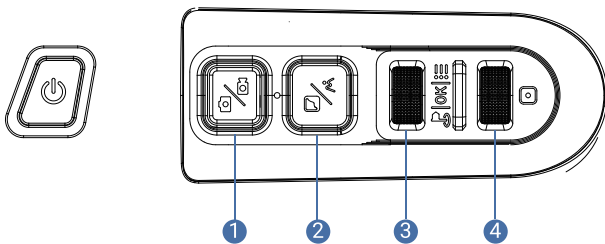
Users are required to tilt and move the device in a figure 8 motion until the compass is calibrated, as shown in the picture.



## Operation Instruction



## Home Screen Mode



Button/Wheel	Click	Double Click	Press and Hold	Wheeling
1	Take Picture	Open Album	Record/End video	/
2	Switch Display Mode	Picture in Picture	Switch Scenes	/
3	LRF	Shutter Mode	Open/Close the Menu Mode	Zoom In/Out
4	/	/	/	Focus

## Explanation:

### Button 1

#### 1. Single press:

- ① **Home screen mode:** single press [Button 1] to zoom in;
- ② **Menu mode:** single press [Button 1] to scroll up or adjust the values;

#### 2. Press and Hold

① **Home screen mode:** After pressing and hold [Button 1], the video and picture files stored on the micro SD card will be displayed.

- Press [Button 1]/[Button 3] to switch among files.
- Press [Button 2] to play/pause the video.
- When playing videos, press [Button 1] to fast forward at 2x/4x/8x times.
- Single press the [Button 4] button to access the following settings:

1)Delete:

- Delete Current
- Delete All

2)Protect:

- Lock Current
- Unlock Current
- Lock All
- Unlock All

3)Slide Show:

- 2 seconds
- 5 seconds
- 8 seconds

**Note:** Press [Button 1]/[Button 3] to move the cursor among “Delete”, “Protect” and “Slide Show”; press [Button 3] to enter the sub-menu, press [Button 4] to return to the file. Long press the [Button 4] button to return the home screen.

- ② When the WiFi is on, press and hold the [Button 1] to turn off WiFi.

### Button 2

#### 1. Single press:

- ① **Home screen mode:** single press [Button 2] to turn on the LRF.
- ② **Menu mode:** single press [Button 2] to confirm.

#### 2. Press and Hold

**Home screen mode:** press and hold [Button 2] to record a video. press and hold [Button 2] again to save the video.

#### 3. Double Press

**Home screen mode:** press and hold [Button 2] to perform the shutter correction.

## Button 3

### 1. Single press:

- ① **Home screen mode:** single press [Button 3] to switch image mode among WT-HOT/BK-HOT/EDGE/RD-HOT/IN-HOT/SKY;
- ② **Menu mode:** single press [Button 3] to scroll down and adjust relative values.

### 2.Press and Hold

**Home screen mode:** press and hold [Button 3] to take photos;

## Button 4

### 1. Single press:

- ① **Home screen mode:** single press [Button 4] to turn on the menu.
- ② **Menu mode:** single press [Button 4] to return to the previous menu.

### 2.Press and Hold

**Home screen mode:** double press [Button 4] to switch scene mode among City/Forest/Rain.

## Power Key

### 1. Single press:

**Home screen mode:** single press the power key to enter the sleep mode.

### 2.Press and Hold

**Home screen mode:** press and hold the power key to turn on/off .

## Menu Mode

**Home screen mode:** single press [Button 4] to enter menu mode. (the shortcut key function is invalid at this time).

## 1. Image Setting

Users can adjust the **image contrast, brightness, and mode**, there are 5 different data set available for quick application.

### Operation:

- Press and hold the Zoom Wheel to open the Menu Mode.
- Rotate the Zoom Wheel to move the cursor to **Image Setting**.
- Press Zoom Wheel to enter.

- Rotate the Zoom Wheel to switch between **Data / Contrast / Brightness / Mode**.
- Press Zoom Wheel to enter.
- Rotate the Zoom Wheel to adjust the Value or change the Data Set.
- Click the Zoom Wheel to save and exit.

## 2. Mode Selection Collection

You can customize the collection of Mode available when using the Button 2.

- WT-HOT
- SKY
- H-Light
- BK-HOT
- RD-HOT
- IN-HOT
- Click Zoom Wheel to enter, select or un-select the mode.
- Click Zoom Wheel to apply and return.

## 3. Display Brightness

Adjusts the screen brightness to suit different environments.

### Operation:

- Click the Zoom Wheel to enter the Menu Mode.
- Rotate the Zoom Wheel to select **Display Brightness**.
- Click Zoom Wheel to enter.
- Rotate the Zoom Wheel to select **Level 0–Level 7**.
- Click the Zoom Wheel to save and return to the home screen.

## 4. Range Unit Selection

Allows selection of distance measurement units.

**Options:** Meter / Yard

### Operation:

- Long press the Zoom Wheel to enter the Menu Mode.
- Rotate the Zoom Wheel to select **Range Unit Selection**.
- Rotate the Zoom Wheel to select **Meter** or **Yard**.
- Click the Zoom Wheel to save and return.

## 5. Status Bar Display Settings

**You can customize the status information in the Home Screen Mode.**

- Long press the Zoom Wheel to enter the Menu Mode.
- Rotate the Zoom Wheel to select **Status Bar Display Settings**.
- Rotate the Zoom Wheel to select **the information you want to retain in the Home Screen**.
- Click the Zoom Wheel to save and return.

## 6. Gyroscope

Displays and calibrates the yaw and pitch angles of the device.

**Operation:**

- Long press the Zoom Wheel to enter the Menu Mode.
- Rotate the Zoom Wheel to select Gyroscope.
- Click the Zoom Wheel to select Gyroscope.

**(1) Display**

Controls whether yaw and pitch angles are shown on the home screen.

- Select **On** or **Off**.
- Click the Zoom Wheel to save and exit.

**(2) Calibration**

- Rotate the Zoom Wheel to select Gyroscope or Compass Calibration.
- Following the instruction on the screen to Calibrate the Gyroscope or Compass.

## 7. Scene Mode

Preset scene modes optimize image performance.

**Available modes:** City / Forest / Rain

**Operation:**

- Rotate the Zoom Wheel in Menu Mode to select **Scene**, click the Zoom Wheel to enter.
- Rotate the Zoom Wheel to choose a scene.
- Click the Zoom Wheel to save and exit.

## 8. Picture in Picture (PIP)

Displays a **2× magnified central image** at the top of the screen.

### Operation:

- Rotate the Zoom Wheel in Menu Mode to select **PIP**, click the Zoom Wheel to enter.
- Rotate the Zoom Wheel to select **PIP ON** or **PIP OFF**.
- Click the Zoom Wheel to save and exit.

## 9. Shutter Mode

Shutter mode can reduce the lagging of thermal imaging visions when the sensor is heated after long time of use.

### Operation:

- Rotate the Zoom Wheel in Menu Mode to select **Shutter Mode**, click the Zoom Wheel to enter.
- Rotate the Zoom Wheel to select **Auto Mode**, **Manual Mode** or **Smart Mode**.
- Click the Zoom Wheel to save and exit.

## 10. Hot Track

Automatically detects and tracks the highest temperature point in the image.

### Operation:

- Rotate the Zoom Wheel in Menu Mode to select **Hot Track**, click the Zoom Wheel to enter.
- Rotate the Zoom Wheel to select **On** or **Off**.
- Click the Zoom Wheel to save and exit.

## 11. Auto Power Off

Automatically powers off the device after a period of inactivity.

**Options:** Off / 1 min / 10 min / 30 min

### Operation:

- Rotate the Zoom Wheel in Menu Mode to select **Auto Power Off**, click the Zoom Wheel to enter.
- Rotate the Zoom Wheel to select duration.
- Click the Zoom Wheel to save and exit.

## 12. Date Stamp

Controls whether the date/time stamp appears on photos and videos.

### Operation:

- Rotate the Zoom Wheel in Menu Mode to select **Date Stamp**, click the Zoom Wheel to enter.
- Rotate the Zoom Wheel to select **On** or **Off**.
- Click the Zoom Wheel to save and exit.

## 13. Wi-Fi

Enables wireless connection to a mobile device for live view and file access.

### Operation:

- Rotate the Zoom Wheel in Menu Mode to select **Wi-Fi**, click the Zoom Wheel to enter.
- Select **On** or **Off** using the Zoom Wheel.
- Click the Zoom Wheel to save and exit.

### Connection steps:

1. Download **PardVision2** from the App Store or Google Play.
2. Enable Wi-Fi on both devices.
3. Connect to the network starting with **PARD**.
4. Password: **12345678**.
5. Open the app to operate.

## 14. Language

Selects the system language.

### Operation:

- Rotate the Zoom Wheel in Menu Mode to select **Language**, click the Zoom Wheel to enter.
- Rotate the Zoom Wheel to choose a language, click the Zoom Wheel to confirm.
- Click the Zoom Wheel to save and exit.

## 15. Date / Time

Sets the system date and time.

### Operation:

- Rotate the Zoom Wheel in Menu Mode to select **Date/Time**, click the Zoom Wheel to enter.
- Rotate the Zoom Wheel to adjust values, click the Zoom Wheel to confirm.
- Click the Zoom Wheel to save and exit.

## 16. Format TF Card (Reset TF Card)

Formats the Micro SD card. All data will be permanently deleted.

### Operation:

- Rotate the Zoom Wheel in Menu Mode to select **Format TF Card**.
- Click the Zoom Wheel to enter.
- Select **Cancel** or **OK**.
- Click the Zoom Wheel to save and exit.

## 17. Blind Pixel Compensation

Compensates for non-responsive pixels to reduce image distortion.

### Operation:

- Rotate the Zoom Wheel in Menu Mode to select **Blind Pixel Compensation**, click the Zoom Wheel to enter.
- Follow on-screen instruction:
  - Put on the lens cap
  - Long press Zoom Wheel to execute
  - Click the Zoom Wheel exit

## 18. Icon Display Time

You can choose the duration of Menu Mode when no operation was made.

### Operation:

- Rotate the Zoom Wheel in Menu Mode to select **Icon Display Time**, click the Zoom Wheel to enter.
- Rotate the Zoom Wheel to select your preferred duration.
- Click the Zoom Wheel to confirm.

## 19. Default Setting

Restores factory default settings and deletes all user data.

### Operation:

- Rotate the Zoom Wheel in Menu Mode to select **Default Settings**, click the Zoom Wheel to enter.
- Select **Cancel** or **OK**.
- Click the Zoom Wheel to confirm and following the instruction on the screen.

## 20. Firmware Upgrade

Updates the system firmware.

### Operation:

- Rotate the Zoom Wheel to select **Firmware Upgrade**, click the Zoom Wheel to enter.
- Following the instruction on the screen.

**Note:** Use a Type-C power supply during firmware upgrade.

## 21. Version

Displays the current firmware version.

### Operation:

- Rotate the Zoom Wheel to select **Version**.
- Click the Zoom Wheel to enter.
- Long press the Zoom Wheel to exit.

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

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Note:** The Grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment. The device has been evaluated to meet general RF exposure requirement. This equipment complies with FCC's RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna(s) must not be co-located or conjunction with any other antenna or transmitter.





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