

User Manual

Product name: Thermal Imaging Camera

Model: Leopard 384

FCC ID:2A30FLEOPARD384

Leopard Thermal Monocular

User Manual

- Company: Shenzhen Pard Technology Co.,Ltd
- Website: www.pard.com
- E-mail: info@pard.com
- Tel: 400-099-2599 / +86-0755-29484438
- Address: Building A Hengxingchang Industrial Park, Baoshi East Road, Shiyan, Bao'an, Shenzhen, 518000, China

Tel: 400-099-2599 / +86-0755-29484438

Address: Building A Hengxingchang Industrial Park, Baoshi East Road, Shiyan, Bao'an, Shenzhen, 518000, China

1. To Users
2. Precautions
3. Package Contents
4. Specifications
5. Description & Key Features
6. Components & Controls
7. Installation
8. Operation Instruction
 - 1) Shortcut Mode
 - 2) Menu Mode

To users

Thank you for your continued support and for choosing PARD Leopard thermal monocular series. 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 thermal monocular and is intended for your reference only.

PARD reserves the right to amend this manual at any time without prior notice to individual users. For the most up-to-date information, we recommend visiting PARD's official website. PARD reserves the final right of interpretation of this manual.

Precautions

- Please remove the insulating tape on the battery before first use. It is recommended to use a fully charged lithium-ion battery with a rated voltage of 3.7V.
- Always turn off the device when it's not in use. If you do not plan on using the device for a period of more than 10 days, please remove the battery and store the battery in a 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 (-5°F/-20°C) or higher than (120°F/50°C).
- Do not disassemble the device without authorization. If you encounter any problems, please contact our after-sales team and report them on our official website. Failure to do so will render the warranty service null and void.

Icon	Contents	Quantity
	Thermal monocular	1
	3.7V 18650 Rechargeable lithium-ion battery	1
	Hand strap	1
	Type-C cable	1
	Shoulder bag	1
	Cloth bag	1
	Lens cap	1
	User's manual	1
	After sales card	1

The Leopard is with compact and lightweight design, the thermal imaging monocular with laser range finder is easy to carry and fits comfortably in the palm of your hands. Eyepiece resolution is 1024 x768 OLED which provides a clear and smooth picture with fine details. You can choose 640*480 (TA62-LRF) or 384*288 (TA32-LRF) thermal imaging sensor to suit your needs. The next generation vanadium oxide IR sensor pixelization of 12μm (micrometers) and a noise equivalent temperature difference (NETD) of $\leq 25\text{mK}$ (TA32-LRF NETD $\leq 35\text{mK}$) create an extremely sensitive device that performs even when environmental thermal contrast is low at great distance.

Key Features

- Small enough to carry
- 1200yds LRF
- 12μm,
- Infrared image enhancement algorithm (IREA)
- 3 Scene modes
- Multi-color palettes
- Hot track
- Photo & video recording
- Optional lens and magnification
- Mute button
- IP67 Waterproof

图一





1. Key1
2. Key2
3. Key3
4. Key4
5. Key5
6. Key6
7. Battery compartment
8. Diopter focus
9. Patch
10. Objective len
11. lens cap
12. USB cover
13. TF Card slot
14. Type-c charging port
15. HDMI high-definition interface

1. Unboxing

Before using this device, please do the following:

- (1) Open the box and remove the device.
- (2) Check to ensure that the package contents listed above are all included in the box.
- (3) Check the device for any damage to the display, body, lens, buttons, etc.
- (4) Make sure that the objective lens and eyepiece are clean & functioning properly.

Note: If any accessories are missing or damaged, please contact our after sales service.

2. Battery installation and startup

The battery installation steps are as follows:

- (1) Press the battery cover button and remove the battery.
- (2) Remove the insulating tape.
- (3) Insert the battery, ensuring that the positive (+) side goes in first and then push and pull the battery buckle backward to lock the battery cover.
- (4) To turn on the device, press and hold the power button for about 3 seconds. (When the power light illuminates and the PARD Logo appears on the screen, the device is ready for use.)

Note:

- Please use a single 18650 rechargeable lithium-ion battery rated 3.7V voltage.
- Please pay attention to align the buckle interface during the push-pull process to avoid slipping.
- Do not put battery into fire.
- Do not put device into water when the battery cap is open.
- Do not disassemble the device without authorization.
- Do not pierce the device with sharp objects.
- Battery should be kept out of reach of children, and the positive and negative terminals of the battery should be installed correctly.

+

3. Diopter focusing

Diopter focusing is used to adjust users with different levels of corrected vision to clearly see the content displayed on the screen as shown in picture 1.

(1) After powering the device, rotate the diopter focusing wheel so that you can see the screen clearly.

(2) Please note that the image is not clearly visible after eyepiece focusing adjustment, as long as the words on the display screen are clearly visible

Note: (the image may not be clear when the objective lens is not well (focused), this procedure is done.

4. Objective lens focusing

(1) Before you focus the objective lens, ensure that the diopter focusing has been completed.

(2) Aim at the target and adjust the objective focusing wheel until you can see the target image clearly as shown in picture below

Operation Instruction:



	Single Press	Press and hold	Double press
Key 1	power/sleep	power on/off	-
Key 2	up/zoom	file / (turn off WiFi)	turn on/off PIP
Key 3	LRF	record video/save video	shutter correction
Key 4	down/switch image modes	take a photo	-
Key 5	menu/back	red dot pointer	switch scene modes

Key 1:

1. Single press:

Press [Key 1] to put device into sleep mode when the device is on. Press [Key 1] again to wake up device from sleep mode.

2. Press and hold:

- Press and hold [Key 1] to turn on / turn off the device.

;

Key 2:

1. Single press: press [Key 2] to zoom in 2x/4x/6x/8x times.

2. Press and hold: long press [Key 2] to enter the playback function menu; On the premise that WiFi is turned on, long press [Key 2] to turn off WiFi.

Key 3:

① Single press:

Home screen mode: press [Key 3] to start the LRF range detection function. The distance will be measured and displayed automatically.

② Press and hold:

Home screen mode: press [Key 3] to record a video. Press and hold [Key 3] again to save the video and exit.

③ Double press:

Home screen mode: double press [Key 3] to start the shutter correction function (To use this short cut key function, you must first enable the auto shutter in the menu).

Key 4

1. Single Press:

TA32-LRF

① Home screen mode : press [Key 4] to switch image modes : WhiteHot/BlackHot/RedHot:
/PseudoColor1/PseudoColor2/IronRed1/IronRed2

TA62-LRF

Home screen mode: press [Key 4] to switch image modes: white hot/sky/edge/black hot/red hot/iron mode.

② Menu mode: press [Key 4] to scroll down or adjust the relevant option settings.

2. Press and hold:

Press and hold [Key 4] to take a photo.

Key 5

1. Single Press:

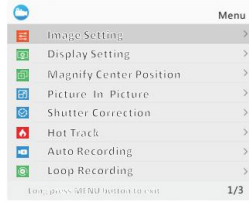
① Home screen mode: press [Key 5] to open/close the menu interface.

② Menu mode: in menu mode press [Key 5] to go back to the home screen.

Home screen mode: single press [Key 4] to enter the menu setting mode to set various function options (the shortcut key function is invalid at this time).

Menu mode (setup mode)

Press [menu key] to enter the menu setting mode, and the interface is shown as pictures below (at this time, the shortcut key is not function)



1. Image setting: press [+ key] [- key] move the cursor to the image setting option, and press [menu key] to enter the sub menu, press [menu key] to switch the contrast / brightness / sharpness / mode options, and press [+ key] [- key] to adjust

—13—

5. Shutter Correction: press [+ key] [- key] to move the cursor to the shutter correction option, and press [menu key] to enter picture correction. Manual picture correction can obtain better picture effect.

1. Image Setting

Users can adjust the image contrast, brightness, sharpness and mode under this setting.

- Press [Key 2]/[Key 4] move the cursor to the image setting option, press [Key 3] to enter the sub-menu.
- Press [Key 3] to switch between contrast / brightness / sharpness / mode options, and press [Key 2]/[Key 4] to adjust the option value.
- Press and hold [Key 3] to exit. Upon the next startup, the device will maintain the saved image settings.

Image default settings: contrast value is 50, brightness value is 60, sharpness is 2 and the mode value is 0.

2. Display setting

Users can adjust the contrast, brightness of the screen, to adapt to different surroundings.

- Press [Key 4] to move the cursor to the display setting options and press [Key 3] to enter the sub-menu.
- Press [Key 3] / [Key 5] to switch the contrast/ brightness option. Press [Key 2]/[Key 4] to adjust the value.
- Press and hold [Key 3] to exit.

Default value: contrast is 4, brightness is 3.

4. Range Unit Selection

- Press [Key 2] / [Key 4] to move the cursor to magnify center position, and press [Key 3] to switch the X / Y axis option.
- Press and hold [Key 2] / [Key 4] to adjust the option value.
- Long press [Key 3] to exit.

6.Scene

There are three built-in scene modes, "City", "Forest" and "Rain". Users can choose any of the available scenes to achieve the best image display effect.

- Press [Key 2]/[Key 4] to move the cursor to the scene option, press [Key 3] to enter the sub-menu.
- Press [Key 2]/[Key 4] to move the cursor to select "City", "Forest" or "Rain" mode. Press [Key3] to save and return to the previous page.

7.Picture in Picture (PIP)

The top center of the display can show a 2x magnified picture to improve aiming visibility, allowing you to see magnified target details without losing the field of view.

- Press [Key 4] to move the cursor to the PIP setting option, and press [Key 3] to enter the sub-menu.
- Press [Key 2]/[Key 4] to move the cursor to select "PIP OFF" or "PIP ON", "Shortcut Key OFF" and "Shortcut Key ON" setting you prefer.
- After selection, press [Key 3] to save and exit.

14.Date Stamp

Users can set whether to display the time stamp in the lower right corner of photos and videos taken.

- Press [Key4] to move the cursor to the date stamp option, press [Key3] to enter the sub-menu;
- Press [Key2] / [Key4] to select on / off date stamp, and press [Key3] to confirm and exit.

15.Record Audio

User can set whether to record audio synchronously in the video.

- Press [Key 4] to move the cursor to the recording audio setting option, press [Key 3] to enter the sub-menu.
- Press [Key 2] / [Key 4] to move the cursor to select "Off" or "On" option, after selection, press [Key 3] to save and return to the previous page.

16 .WiFi

Through the WiFi connection, you can use your phone, PC or tablet as an external viewfinder enabling users to synchronously see the photos and videos on a larger screen.

- Press [Key 4] to move the cursor to the WiFi setting option, and press [Key 3] to enter the sub-menu.
- Press [Key 2] / [Key 4] to move the cursor to select "On" or "Off" option. Select "Off", and return to the previous page. Select "On" to enable WiFi and return to the home screen.

Steps to connect to your mobile device:

- Download "PardVision" from the Apple App Store or the Google Play Store.

- Turn on the WiFi on your device and on your mobile device.
- Search the WiFi on your mobile device (the device WiFi network is a string of characters starting with PARD, which is a unique string of numbers). Please enter the password: 12345678 to connect.

17. Date/Time

. Users can set the system date and time of the device.

- Press [Key 4] to move the cursor to the date/time setting option, press [Key 3] to enter the sub-menu.
- Press [Key 2] / [Key 4] to adjust the setting date and time value, press [Key 3] to switch options, press [Key 5] to save and return to the previous page.

18. Format

If users want to reformat the TF Card, it will delete all the data on the TF card permanently. Data cannot be recovered after reformatting. **Please operate with caution!**

- Press [Key 4] to move the cursor to the format option, press [Key 3] to enter the sub-menu.
- Press [Key 2] / [Key 4] to select Cancel / Ok, and press [Key 3] to confirm and exit the menu interface .

21.Firmware Upgrade

System firmware can be updated to maintain an optimized current version.

- Press [Key 4] to move the cursor to the firmware upgrade option, and press [Key 3] to enter the sub-menu. You will see an important reminder: Upgrading firmware may cause damage to the equipment, please operate with caution!
- Press and hold [Key 3] to confirm and press [Key 5] to exit and return to the previous page.

Note: When performing this operation, please load the device with a fully charged battery and type-C power supply. Powering off the device during the firmware update process may cause damage to the device components. Please operate with caution.

22. Version

This function displays the device's version.

- Press [Key 4] to move the cursor to the version option, press [Key 3] to
- enter the sub-menu to view.
- Press [Key 3] again to exit and return to the previous page.

FCC WARNING

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.