

# Gemini Series product Instructions

thermal monocular



# catalogue

## CONTENTS

1 . product overview	01
2 . Introduction of product parts	02
3 . In the Box	03
4 . operation Instructions	03
5 . Function of the Buttons	05
6 . Menu Function	06
7 . connect the APP	09
8 . specifications	10
9 . Maintenance and care	13



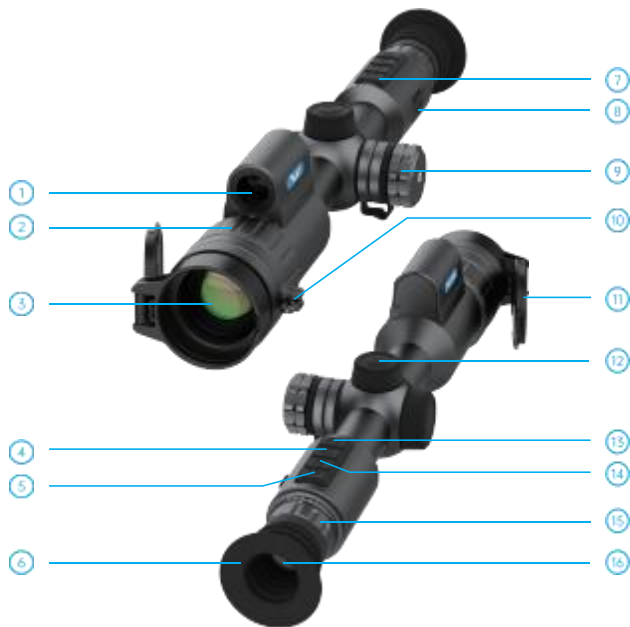
## 1 . product overview

1 . GE is an infrared thermal imaging telescope used for observation and ranging at night and in bad weather conditions.

2. The infrared optical system receives the infrared radiation of the target to be measured, and reflects the target infrared radiation energy distribution to each photosensitive element of the infrared detector array on the focal plane through spectral filtering. The detector converts the infrared radiation energy into an electrical signal, and the detector bias and pre-amplification input circuit outputs the required amplified signal and injects it into the readout circuit.

3. After the movement component digitizes the output signal of the detector, the initial infrared image is corrected, bad pixels are eliminated, brightness and contrast are controlled, pseudo-color is drawn, and the interface and cross division are processed. The processed signal is sent to the OLED display. The operator observes the infrared thermal image of the target to be measured through the 14x eyepiece.

## 2. Introduction of product parts



1 . Distance Measurement Module	2 . The objective lens-focus ring	3 . objective Lens	4 . Navigation Up Button
5 . Navigation DOWN Button	6 . Eyeshade	7 . Device LED Indicator	8 . Data compartment cover
9 . Battery cover	10 . Fov switching	11 . Lens cover	12 . power(on and off) Button
13 . photo and Recording Button REC	14 . Menu Button	15 . Dioptre Adjustment Ring	16 . Eyepiece

## 3. In the Box

- ▶ GE Thermal Imaging camera
- ▶ 18650 Battery
- ▶ Handbag
- ▶ Type-c cable
- ▶ Manual
- ▶ Mount (with screws and Hex-Nut wrenches)

## 4. operation Instructions

### 4.1 . warnings

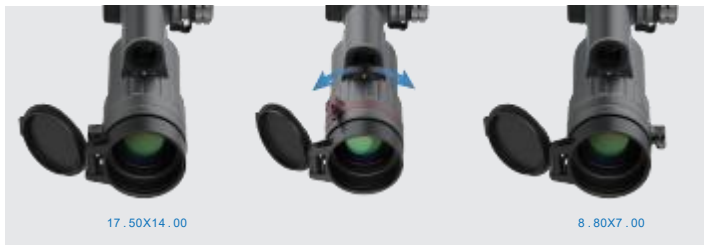
- (1) Do not point the thermal imaging directly at the sun , Co2 lasers , welding machines , or other high-intensity radiation sources.
- (2) The interval between two power cycles should be at least 20 seconds.
- (3)The thermal imaging binoculars incorporate precision optical components and electrostatic-sensitive electronic devices. Avoid dropping , striking , or subjecting the device and its accessories to excessive vibration to prevent structural deformation or misalignment of mounting surfaces.
- (4) Do not disassemble the thermal imaging. In case of malfunction , contact the manufacturer immediately. unauthorized disassembly will void the warranty.
- (5) when not in use or during transportation , remove the battery and store the thermal imaging binoculars in a protective carrying case.
- (6) Replace the battery promptly when the battery level is low to prevent deep discharge , which may damage the battery.
- (7) using the device outside the specified operating conditions may cause damage to the thermal imaging.

## 4.2. cautions

- (1) when cleaning non-optical surfaces of the thermal imaging , do not use chemical solvents or thinners. use a clean , soft, and dry microfiber cloth to wipe the exterior.
- (2) The infrared lens is coated with an anti-reflective layer to enhance transmission. clean the lens only when visibly dirty, os frequent cleaning may wear down the coating. Avoid touching the lens surface, as acids and oils from fingerprints may damage the coating and lens. use only a specialized lens cloth for cleaning.
- (3) After completing observations or if the device is not in use for an extended period while powered on , turn it off promptly to extend its operational lifespan.

## 4.3. Dual Fov switching

- (1) GE is equipped with a field of view switch , which can quickly switch the device's field of view to cope with more complex usage environments.



## 5. Function of the Buttons



### power Button

- (1) press and hold the power button for 3 seconds to turn on the device. In the powered-on state, press and hold the power button for 3 seconds to initiate the shutdown countdown. while powered on, press and hold the power button to enter sleep mode, indicated by a sleep icon on the screen . A Short press in sleep mode will wake the device.
- (2) short and press the switch block under the observation interface.
- (3) when out of menu, In the observation interface, press the power button to refresh the device.

### photos / Recording

- (1) short press to take photos.
- (2) Long press for more than 1.5 seconds to start the recording ,In the video recording state, press and hold for more than 1.5 seconds to turn off the video recording.

### Navigation Up Butt. n

- (1) In menu mode : press to switch menu items upwards.
- (2) when not in menu mode : press to change operating mode.
- (3) Long press to turn on or off the picture in picture.
















### Menu Button

- (1) short press to bring up the menu , move the menu options up and down , and short press the "M" key to enter the secondary menu.  
and long press to return to the previous menu level in menu mode.
- (2) when LRF is on , short press the "M" button to lock/unlock the ranging value.












### Navigation D. wn Butt. n





- (1) In menu mode :press to switch menu items downwards.  
when not in menu mode : press to change set-up zoom 1x, 2x, 4x, 8x ·
- (2) Long press to turn on or off the laser rangefinder.

## 6. Menu Function

Icon	Primary Menu	Functional Description
	operating palette	Options: White Hot / High Light Mode / Black Hot / Green Hot / Fusion/ Default mode is "White Hot"      white Hot High Light Mode Black Hot Green Hot Fusion
	video output	Options: "On"/"Off" The video output function CVBS will be on/off accordingly.
	WIFI	Options: "On"/"Off" Turn on the WiFi in the machine menu, then turn on the mobile phone WiFi and the APP in the test software, find the MAC address name of the mobile phone WiFi "****-**-***", and enter the password "12345678" to connect the device. Live image will be displayed on the App after the phone is connected to the device's WiFi.
	picture in picture	Enter the menu option on / off.
	Reticle Type	options : OFF, and the 10 reticle types are optional.
	Reticle color	options : Black, white, gray, red, and green.
	Reticle profiles	used to save the ballistic zero point parameters set by the user. select one of the saved profiles (Max. 10 profiles).
	Reticles Adjustment (zeroing)	Freeze the image by pressing the MENU button. Move the reticle horizontally or vertically with the UP/DOWN buttons. Switch between horizontal and vertical adjustments by pressing REC button. After the reticle matches the point of impact, press the MENU button to save the position and quit, long press the menu cancel save. The reticle profile will be saved with the distance as it's name.
	Gyroscope	Press the menu button to enter the sub-menu, press "up" or "down" to select on or off, and short press the menu button to confirm your selection.
	Distance Measurement unit	options: Meter/Yard.



	Distance Measurement Mode	Select On / off the ranging measurement, options for 5 minutes, 10 minutes and 20 minutes.
	Display Brightness	click the menu button to enter the menu. There are 10 options for brightness. select any option and the screen will change accordingly. You can select the appropriate gear according to your usage habits.
	Target Brightness	click the menu button to enter the menu. There are 10 options for contrast. select any option and the image brightness will change accordingly.
	contrast Ratio	click the menu button to enter the menu. There are 10 options for contrast. select any option and the image will change accordingly. The larger the value, the stronger the image contrast.
	Image Detail Boost	click the menu button to enter the image detail enhancement option. The larger the number, the more details.
	Date/Time	Move the options by pressing the MENU button. change the value using the Up/DOWN button. confirm the values by pressing the MENU button. Quit by holding the MENU button.
	Language	click the menu button to enter the menu language setting, select the appropriate language with the up and down keys, and short press the menu button to confirm.
	Record Audio	select "video Audio" with the cursor and press the menu key to call out the submenu. select "on" or "off" on the submenu to realize video audio recording.
	Format	Enter the format submenu, short press the menu key to select Ok or cancel. please select confirm carefully! Data cannot be restored after deletion!
	Auto power off	options: 3 minutes, 5 minutes, off, default off, you can choose to automatically shut down after 3 or 5 minutes after turning on the device.
	Default	After the cursor selects "Default settings", press the menu key to call out the submenu. select "confirm" or "cancel" on the submenu to restore the default settings. After confirmation, the factory default settings will be restored. please operate with caution.

	pixel cure	select "pixel cure" and press MENU button to get to the submenu. The lens should be covered with lens cover before performing the pixel cure. After repair, you need to save. press the navigation key up/down to move the cursor, press the power button to switch options, and short press the menu button to save.
	Image Adjustment	options: "cancel"/"confirm" select " Image Adjustment" in the main menu. press MENU button to select "confirm " and cover the lens if the image adjustment is required. correct the uniformity of the background image and automatically save and exit after the correction is completed.
	Auto Ballistic calculator (BC)	select BC and press the MENU button to get to the sub menu: on/off/setting. press IRecord ButtonI to move to set parameters. press IUP/Down ButtonI to set values.
	version	select "version" to view the device's software version.

## 7 . connect the APP

Download the exclusive APP to connect your mobile device via WIFI.



Android / IOS Scan the QR Code to the download the APP.



Download and install the APP



Turn on WIFI on the phone and device



open the APP



select wifi "xxx." and connect  
(password:12345678)

## 8 . specifications



### GE6-50L

Sensor	
Type	uncooled vox
pixel	640x512
Frame Rate	50 Hz
pixel size	12μm
NETD	≤18mk
Optical Characteristics	
objective	50mm/F1.0
Base Ratio	2.8X
Digital zoom	1x /2 x/4 x/8x
Eye Relief	50 mm
DioptrAdjustment	+5/-5 D
Focus Distance	5m - co
FOV	17.5°X14.0°/8.8X7.0
Detection Range (Target size: 1.7mx0.5m)	2500m

<b>Display</b>	
operate Mode	white Hot, High Light Mode , Black Hot, Green Hot, Fusion
Type/Resolution	0.39 inch/ OLED / 1024X768
<b>Operational Characteristics</b>	
3D Gyroscope	YES
power supply	3-4.2 V
Battery	18650/26650
External power supply	5V (USB)
operating Time (At Temperature =22c)	6 hours
Max. Recoil power, Joules	10000 J
waterproof Rating	IP67
operating Temperature	-20C~+50C
Dimensions	428x96x85mm
weight (without Battery/ Mount)	937g
<b>Video Recorder</b>	
video / photo Resolution	1024x768
video / photo Format	. mp4/ .jpg
supported Memory Type	Built-in 32G Memory card
<b>Wifi Channel</b>	
Frequency	2.4GHz
standard	802.11 b/g/n/20/40
wifi signal Range	15m
<b>Rangefinder</b>	
wavelength	905nm

Max. Measuring Range	1000m
Measuring Accuracy	+ /- 1m

## 9 . Maintenance and care

- (1) After observation or if the thermal imaging scope is left on for an extended period without use , turn it off promptly to extend its operational lifespan.
- (2) The lens of thermal imaging scope is a critical optical component. During installation and use, avoid contact with oil , chemicals , or other contaminants that may damage the lens surface. Always cover the lens with the lens cap after use.
- (3) when not in use or during transportation , remove the battery and store the thermal imaging scope in its protective case.
- (4) For long-term storage or periods of inactivity, keep the thermal imaging scope in a cool , dry environment.
- (5) Do not clean the housing of the thermal imaging scope with chemical solvents or thinners. Instead , use a clean , soft, and dry lint-free cloth.
- (6) clean the lens only when visibly dirty. Avoid touching the lens surface , as acids from fingerprints can damage the coating and the lens itself. use only a specialized lens cloth for cleaning.
- (7) If the device is not used for an extended period, power it on and perform a calibration check at least once every six months.

**FCC Caution:**

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.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**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.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.



FALCON

Thermal Imaging&Nightvision

[Www.falconoptic.com](http://www.falconoptic.com)