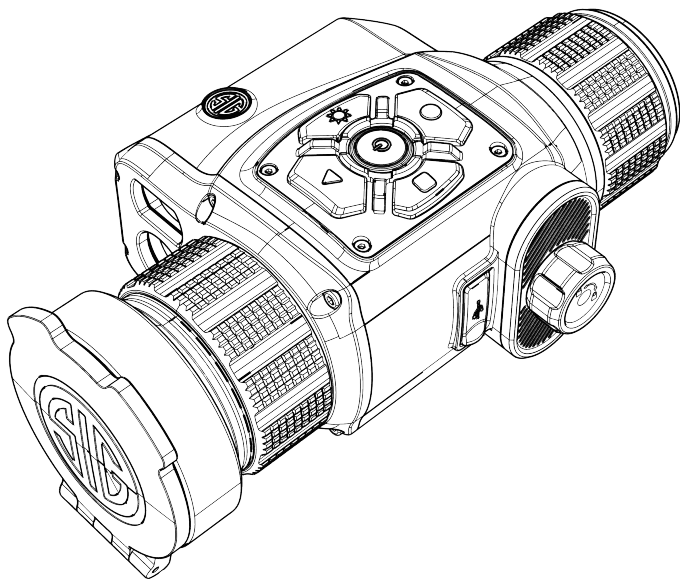


ECHO

SV50-LRF

THERMAL SIGHT



Attention!

Export of **SV50-LRF** models
May have export limitations depending on
the laws in your region.



Attention!



The proper usage of the device is important for safe exploitation!
Therefore read carefully the present manual!



If the device was left in storage for a longer period of time, before exploitation check its functionality.



Disassembling of the device is prohibited, except in authorized repair centers.



The external optical surfaces should be clean at all times. Touching the optical surfaces with bare hands is not recommended.



Sand and sea water can damage the optical coatings!



Do not point the device directly at the sun!



Image performance is dependent on scenery and atmosphere conditions. Contrast in the same image may vary as a function of the time of day due to the effect of the sun. For example, at sunset objects will have absorbed different levels of heat resulting in greater temperature differences and better contrast.



When left in storage for a longer period of time, batteries have to be removed and stored in polyethylene bags to prevent contact with metal. (It is recommended to recharge the batteries every two to three months)



When carrying or transporting the device, put the protective lens cap!



Condensation can cause fogging of the optical surfaces! Condensation occurs when the temperature or humidity changes as follows:

- When moving the device from cold to warm place or vice versa;
- In places with high humidity.

When equalizing the temperature of the device with the environmental, the condensation disappears. Use the towel to remove moisture.



Clean the lens surfaces with the Lens Cloth or with the napkin!



LEGAL NOTICE

Before attaching to weapons, check the regional legal regulations in the area of application.

The attachment to a weapon is always the sole responsibility of the user.

The Quick menu allows change of basic settings.

UP



PiP

Long press left button to turn on/off pip function

Down



Take Photo

Short press Right button to take a photo.

Start/Stop Video Recording

Long press Right button to start/stop video recording.

Right



NUC

Short press Left button to do Manual Non-uniformity calibration

Main Menu

Long Press Up Button to enter/exit Main menu.

Left



ZOOM

Short press Down button to Switch 1x/2x/4x/8x magnification

Gama

Long press Down button to switch open or close Gama

Power off

Long press Middle button to power off the device

Take Photo/Video on-boarding

Short Press Right button to take a photo

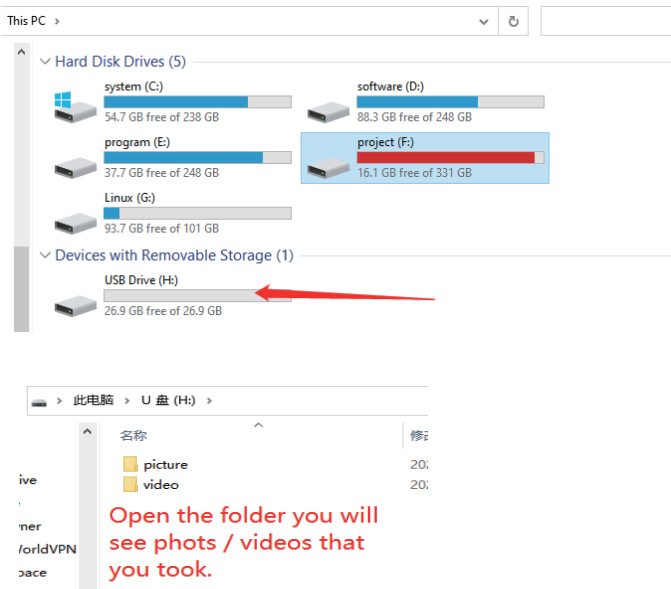
Please note the following before using:

You can not take photos/videos while connecting with PC. Otherwise the photos/videos are not actually saved. And Photos/videos can only be taken when WiFi is on

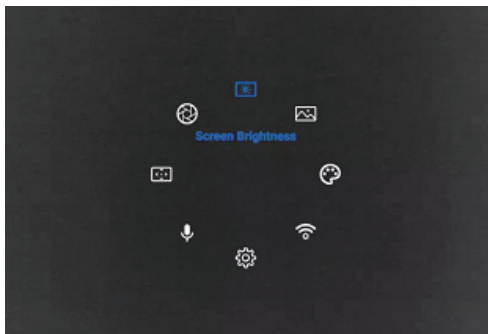
When you take photos, do not press too quickly.

How to replay on PC?

Connect the Type-C usb cable to PC.



Long press Up button to enter main menu.



Short press Right button to move the cursor from 1 to 8, short press Left button to move the cursor from 8 to 1.

- 1) Screen Brightness
- 2) Image Mode
- 3) Palette
- 4) WiFi
- 5) Advance Setting
- 6) Microphone
- 7) Alignment
- 8) NUC



Screen Brightness

Short press Center button enter screen bright mode, Short press Left/Right button to change Screen Brightness from 1~9.

When the brightness is adjusted to 9 or 1, change the setting according to the narrow points.

Long press Right button to exit screen bright mode.



Image Mode (standby)

Short press Center button enter image mode, Short press Left/Right button to turn on/off standby;

If the standby mode is turned on, the button will enter the standby mode after no operation for 2 minutes

Long press Right button to exit image mode;



Palette

Short press Center button enter palette mode, Short press Left/Right button to switch the Palette from WH-BH;

Long press Right button to exit palette mode;



WiFi

Short press Center button enter wifi mode,

Short press Left/Right button to turn on/off WiFi, the default status is WiFi off.

With shown in display means WiFi is on, without shown in display means WiFi is Off.

Long press Right button to exit wifi mode;



Advance Setting

Short press Center button to enter submenu of Advance Setting.

Long press Right button to exit submenu of Advance Setting.

Short press Down button to move the cursor from 0 to M, short press Up button to move the cursor from M to 0.

Short press center button to enter menu ;

Short press Left/Right to change the parameter value;

long press Right button to exit menu;

0)Device info :Device version number;

1)Contrast :Contrast parameters grade 0-9;

2)Sharp grade :sharp grade 0-14;

3)Sharp : sharp on/off;

4)Light bright : light parameters grade 0-9

5)3D : 3D denoise on/off;

6)2D grade : 2D denoising grade 0-7;

- 7)2D : 2D denoise on/off;
8)Med grade: median filter grade 0-6;
9)Defective pixel repair : short press Right to clear bad point ,short press Left to save bad point data ;
M)magnification: Detail separation grade :1 -6;



microphone

Short press Center button enter microphone mode, Short press Left/Right button to turn on/off microphone;
Long press Up button to exit microphone mode;
Please note the following before using:
Turn the microphone on and off only when WiFi is on



Calibration

Short press Center button enter calibration mode ,Short press Left/Right button to switch A/M/S mode;
Long press Right button to exit calibration mode;

- Before storing it, clean obligatory the device (if on its surface there are moisture, dust or traces of dirt)!
- Make sure that there are no traces of moisture, and the battery compartment is empty!
- It is also possible for a short periods of time device to be stored in a suitable soft pack, bag or cartridge box.
- The premises in which the device is kept for long term have to be dry, enclosed, unheated and ventilated.
- During the storage should not be allowed exposure to aggressive environments, temperatures below -50°C and above $+60^{\circ}\text{C}$, relative humidity greater than 80%, and prolonged periods of direct sunlight.
- Before each transportation, the product should be neatly packed in its original packaging (transport bag) and all other items and accessories should be carefully and steadily placed in the bag. After that the bag should be steadily placed in the transport suitcase.
- You can ship the product with all types of transport at different distances and at altitude up to 12000 m.

SV50-LRF Specification	
	SV50-LRF
Detector	
Type	Uncooled Vox
Resolution	640x512
Frame rate	50Hz
Pixel	12μm
Spectral range	8-14μm
NETD	< 20mk
Optical Characteristics	
Objective lens	50mm
Magnification	1.5X
FOV(H×V), m@100m	8.8×7°
Close-up range	5m
Functions	
Palettes	2
WIFI	Yes
Storage capacity	32G
Display	
Type	OLED
Resolution	1024×768
Power Supply	
Battery	2×18650
External power supply	5V Type-C
Operating time (at t=22°C)	12h
Physical Characteristics	
Weight without battery	≤500g
Dimension	≤179×101×70mm
Environmental Compatibility	
Ingress protection rating	IP67
Operating temperature	-20℃-50℃
Storage temperature	-40℃-60℃

FCC Caution.

§ 15.19 Labelling requirements.

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.

§ 15.21 Information to user.

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

§ 15.105 Information to the user.

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.