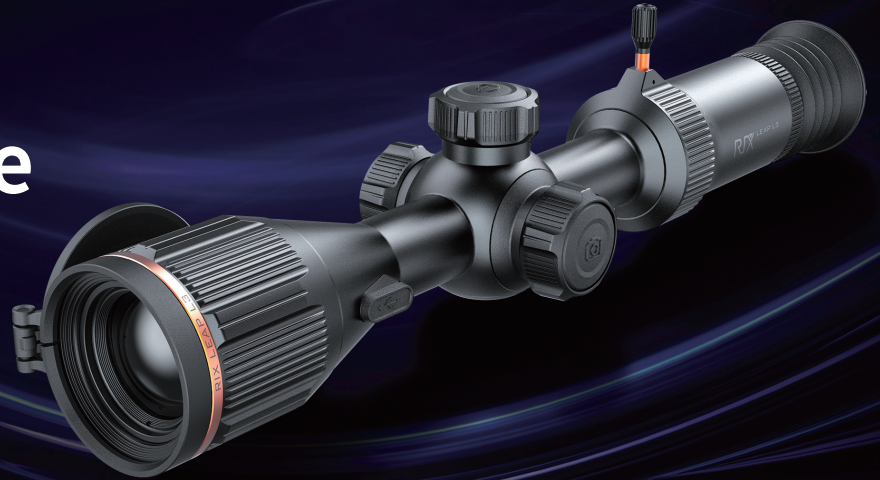





LEAP Series Thermal Imaging Scope



User Manual v1.0

Visir Inc.

 (510)988-5580

 info@rix-nv.com



RoHS



(FCC ID: 2A7ZZ-2G-00)

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Model		LEAP L3	LEAP L6
Sensor	Type	VOx Uncooled	
	Resolution, pixels	384×216	640×360
	Pixel pitch, μm	12	12
	NETD, mK	<25	
	Frame rate, Hz	50	
Optics	Objective lens, mm	35mm	50mm
	Optic zoom, x	3.2-9.6	2.8-7.6
	Field of view (H), degrees / m @ 100 m	7.5/13.2	8.8/15.4
	Digital zoom, x	1 - 4	
	Eye relief, mm	50	
	Diopter Adjustment, D	-5 - +5	
Range Performance	Detection range,y	1800	2600
Display	Type	AMOLED	
	Resolution, pixels	1920×1080	
Video Recorder	Video / photo resolution, pixel	960×540	

Model		LEAP L3	LEAP L6
	Video / photo format	.mp4 / .jpg	
	Built-in memory, GB	32	
Wi-Fi	Wireless Protocol	Wi-Fi	
	Frequency, GHz	2.4GHz	
Environmental Characteristics	Degree of protection, IP code	IP67	
	Operating temperature range, °F	-4 - +122	
	Battery type	18650	
	Capacity, mAh	3200	
	Operating time on battery pack (at t=22°C), h *	9	8
	External power supply, V	5V (Type C USB)	
Weight & Size	Dimensions, inch	14.2×3.5×3	14.6×3.5×3
	Weight, lb	2.4	2.6

01 In the Box ▼

- LEAP series thermal imaging scope
- Mounting clamp
- Portable bag
- Eyeshade
- Type-C data cable
- Lens cloth

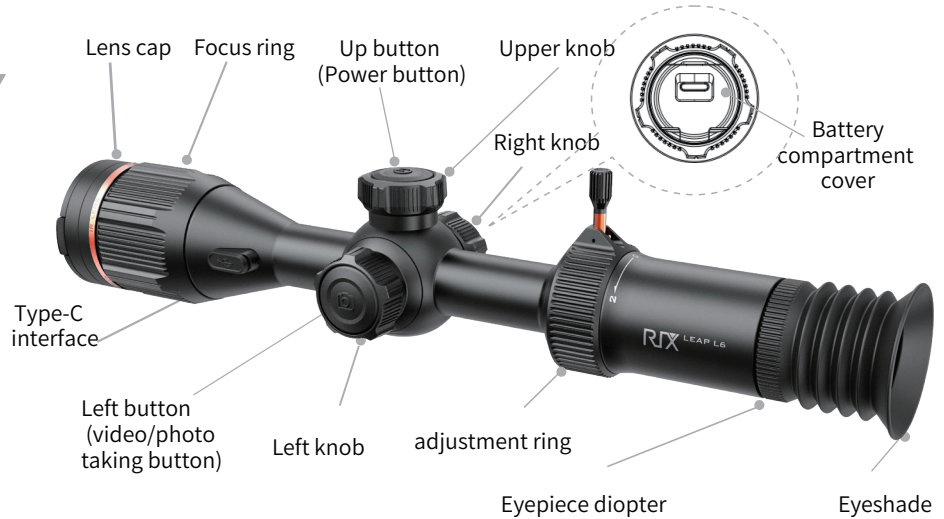
02 Description ▼

Introducing the LEAP series, featuring advanced thermal imaging technology and high-sensitivity infrared detectors for exceptional outdoor hunting and night vision capabilities. With the ability to observe targets hidden behind obstacles and perform in adverse weather conditions, such as rain, snow, fog, and haze, the LEAP series is perfect for night hunting, observation, and geographical positioning. Equipped with a 30mm standard pipe diameter, it offers a range of functions including photo taking, video recording, automatic shooting video recording, optical eyepiece magnification, digital zoom, PIP, and multiple reticle options.

03 Product Features

<ul style="list-style-type: none"> • High resolution 1920×1080 display 	<ul style="list-style-type: none"> • Digital zoom: 1× ~ 4×
<ul style="list-style-type: none"> • Zoom eyepiece, super-large basic visual magnification 	<ul style="list-style-type: none"> • PIP function
<ul style="list-style-type: none"> • High image quality 	<ul style="list-style-type: none"> • Built-in Wi-Fi module, supporting app connection
<ul style="list-style-type: none"> • Replaceable 18650 battery, long battery life 	<ul style="list-style-type: none"> • "IMAGE ENH Mode"
<ul style="list-style-type: none"> • Built-in 32G storage , photo taking and video recording available 	

04 Product Appearance

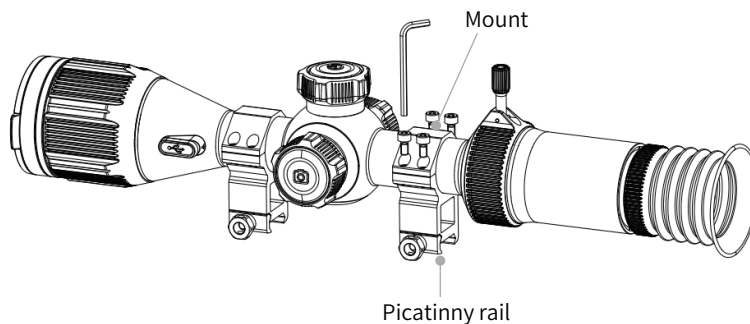


05 Device Preparation ▼

- Open the packaging box and take out the scope;
- Check and confirm that the accessories in the package are complete;
- Check the scope body, lens surface, eyepiece, buttons, and knobs to confirm that there is no damage;
- Make sure the surface of the optical lens is clean before use;

06 Device Installation ▼

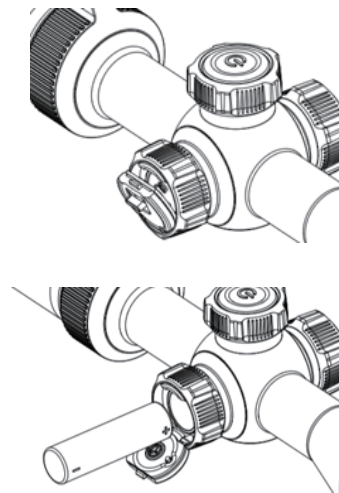
There are two Picatinny mounting brackets in the accessories in the package. Please follow the schematic diagram below for installation.



07 Device Power Supply ▼

The LEAP series is powered by a replaceable 18650 battery. A single battery can provide up to 8 hours of continuous operation.

- Push the switch to open the battery compartment cover;
- Put the 18650 battery into the battery compartment. Pay attention to the direction of the positive and negative poles, with the positive pole inward, and the negative pole outward;
- After putting the battery in, press the battery compartment cover firmly, and the switch will automatically pop up and lock.



Safety Precautions

- Please remove the battery if the device is not in use for a long time;
- Do not power the device with a modified or damaged battery;
- Do not expose the device to high temperatures or open flame;
- Please Note: The decrease in battery pack capacity under sub-zero temperatures is a normal occurrence and not a factory defect;
- Do not use the battery at a temperature above 50°C, as it may reduce the service life of the battery.

08 Key layout and Functions

Button	Current Status	Short Press	Long Press	Rotate
Up button (Power button)	Powered off	—	Power on the device	—
	Home screen	Shutter correction	Shut down the device	—
	Standby	Wake up the device		—
	Main menu screen	Return to the upper menu with saving changes	—	—
Left button	Home screen	Start / Stop video recording	Take a photo	—
	Main menu screen	Confirm selection/Enter the submenu	—	—
Left knob	Home screen	—	—	Open menu options
	Main menu screen	—	—	switch menu options
	Setting menu screen	—	—	switch menu options
Upper knob	Home screen	—	—	Switch image mode
	Main menu interface	—	—	Adjust the parameters of a function
	Zeroing interface	—	—	move to the left / right
Right knob	Home screen	—	—	Adjust the magnification
	Main menu interface	—	—	Adjust the parameters of a function
	Zeroing interface	—	—	move to the up / down

09 Power-on and Settings ▼

- Remove the lens cap, and press and hold the Power button to power on the device. Then, the home screen is displayed after several seconds;
- Rotate the eyepiece diopter adjustment ring until the display icon can be seen clearly;
- Adjust the focus ring of the objective lens to achieve a clear focus on the observed object ;
- For the image mode, display brightness, image contrast, and other functions, please refer to the shortcut menu functions in this manual;
- After use, press and hold the Power button to display the shutdown progress bar. When the progress bar is at the shutdown position, release the button to turn off the thermal imager.

10 Status Bar ▼

The status bar, located at the top of the display, provides a visual representation of the scope's current operational status. The display content from the left to the right is as follows:

1. Zeroing Options
2. Visual Magnification
3. Shutter Mode: Automatic Shutter A/Manual Shutter M
4. Wi-Fi: On/Off
5. Time
6. Battery Level

● Digital Zoom

The LEAP series features a digital zoom function, allowing for quick and convenient image magnification. On the home screen, simply rotate the right knob to seamlessly zoom in and out on the image. The status bar provides a real-time display of the corresponding magnification level as you adjust it.

● Image Mode Switching

The LEAP series offers the flexibility to switch between various image modes, for different observation scenarios. On the home screen, toggle the image mode by rotating the upper knob. The available options include white hot (default), black hot, red hot, rainbow, single red, and single green.

● Photo Taking/Video Mode

- **Photo Taking:** On the home screen, press and hold the left button to take a photo, and the screen will freeze, with a photo icon flashing in the lower right corner;
- **Video Recording:** On the home screen, press the left button to start recording, and a prompt box showing the recording time appears in the lower right corner of the screen, with a time format of HH:MM:SS (hour: minute: second). Press and hold the left button again to stop and save the video recording;

Note:

- The photos and videos taken will be saved on the built-in memory card respectively in the format of IMG_yyyyMMd-dHHmmss.jpg (photos) and VID_yyyyMMdHHmmss.mp4 (videos); (It is recommended to synchronize the device

time and date through the app before using the photo taking/video mode. You can find specific operation instructions in the LEAP Product App which is available to download on our website.

- The maximum duration of a video recording file is 30 minutes. When the duration is more than 30 minutes, the video will be automatically recorded onto a new file;
- For operations of photos and videos, turn on the device to run, and connect it to the computer through a data cable. Double-click MY COMPUTER on the Desktop Screen, find the device named "RIX", and double-click to open the device named "LEAP_ Storage" to access the captured media;
- You can easily optimize the storage space by either deleting or moving the media files to a storage device .

12 Function Menu ▼

On the home screen, rotate the left knob to open the function menu.

● Display Settings

- In the function menu, rotate the left knob to select Display Settings;
- Rotate the upper knob to set Display Brightness, with a range of 1–10 and 5 as the default;
- Rotate the right knob to set Contrast, with a range of 1–10, with 5 being the default.

● Reticle Settings

- In the function menu, rotate the left knob to select Reticle Setting;
- Rotate the upper knob to set the Reticle Style, with a total of 8 reticle options available;



- Rotate the right knob to set the Reticle Color, and choose from black red, black green, white red, white green, black white, white black, red, green, blue, and yellow.

● Rain and Fog Mode

- In the function menu, rotate the left knob to select Rain and Fog Mode;
- Rotate the upper knob to turn this function on/off;
- When activated, the Rain and Fog Mode is designed to enhance image details in challenging weather conditions such as rain, fog, or heavy snow.

● PIP

- In the function menu, rotate the left knob to select PIP;
- Rotate the upper knob to turn this function on/off
- When the PIP function is activated, a frame line in the middle of the display highlights the selected area for enlargement. A small window appears on the upper part of the display, magnifying the selected area by 2 times. This allows users to easily observe target details and aim more accurately.

● Zeroing Options

- In the function menu, rotate the left knob to select Zeroing Options;
- Rotate the upper knob to switch back and forth between zeroing options;

● Shooting Video

- In the function menu, rotate the left knob to select Shooting Video;

- Rotate the upper knob to turn this function on/off;
- By enabling the Shooting Video function, you can automatically capture and save remarkable moments of hunting and shooting..

● Wi-Fi

The LEAP series has a built-in Wi-Fi module. The device can connect to an external device (computer or mobile phone) via Wi-Fi.

- In the function menu, rotate the left knob to select the Wi-Fi function;
- Rotate the upper knob to turn this function on/off;
- Search for the Wi-Fi named "LEAP_XXXXXX" on the external device, With "XXXXXX" being the serial number of the device.
- Select the Wi-Fi and enter the password to connect. The initial password is 12345678;
- After a successful connection to Wi-Fi, the device can be controlled via the mobile app.

Note:

- The LEAP series allows you to change the name and password of the Wi-Fi in the app.
- In the app, find the My Device icon, and click it to enter the interface for settings;
- In the text box, enter and submit the new Wi-Fi name (SSID) and password;
- After submitting the changes, reset the device to activate them.

Note:

If the device is reset, the name and password of the Wi-Fi will also be restored to the default settings.

● Stadiametric Rangefinding

The LEAP series includes the stadiametric rangefinding function, which calculates the approximate distance from a target with a known size.

- In the function menu, rotate the left knob to select Stadiametric Rangefinding;
- Rotate the upper knob to select the size of the target, and rotate the right knob to move the upper and lower horizontal lines of the display area to coincide with the upper and lower edges of the target;
- The distance measurement value is displayed below the horizontal line in real time.

13 Setting Menu

On the home screen, rotate the left knob to open the Function Menu. In the Function Menu, rotate the left knob to select Settings, and then press the left button to open the Setting Menu.

● Zeroing

- In the Setting Menu, rotate the left knob to select Zeroing, and press the left button to enter the interface for zeroing settings;
- Rotate the left knob to switch between the A/B/C/D/E zeroing profile, or press the plus sign to add a new one; after selecting the zeroing profile, press the left button to enter the zeroing interface;
- On the zeroing interface, use the left knob to navigate through the options, including zeroing distance setting, screen freeze, reticle movement, save zeroing and exit, delete current distance, and zeroing deletion. Simply rotate the left knob to select the desired option;
- When selecting Zeroing Distance, rotate the upper knob to choose the setting options for hundreds, tens, and ones. To adjust each digit, rotate the right knob and cycle through the numbers 0-9 accordingly;

- When Screen Freeze is selected, press the left button to freeze the screen;
- When Reticle Movement is selected, rotate the upper knob to move the reticle in the X direction, and rotate the right knob to move the reticle in the Y direction;
- Once the reticle is calibrated, choose " Save" to save the calibration settings and exit directly. A prompt will confirm the successful saving, and you will be returned to the home screen.
- When Exit without saving is selected, press the left button to exit without saving and return to the home screen;
- If you select "Delete," simply press the left button to delete the current group and return to the upper menu of the zeroing interface. In the event that there is only one group remaining, a prompt will appear indicating that the deletion has been canceled, stating: "There is only one group left. Delete operation canceled."

● Shutter Correction Mode

Calibration is an effective solution for enhancing degraded or uneven images. By balancing the background temperature of the detector, calibration can eliminate image defects and improve overall quality.

- In the Setting Menu, rotate the left knob to select Shutter Correction Mode;
- Rotate the upper knob to switch between Auto Calibration and Manual Calibration;
- When Auto Calibration is selected, the device will automatically correct the shutter according to the software algorithm.
- When Manual Calibration is selected, on the home screen, press the up button to correct manually.

● Pixel Defect Correction

When using the scope, you may see pixel defects, such as visible light spots or dark spots with stable brightness. To address this problem, the Pixel Defect Correction function can be used to remove the pixel defects.

- In the Setting Menu, rotate the left knob to select Pixel Defect Correction, and press the left button to enter the interface for pixel defect correction;
- In this interface, rotate the upper knob/right knob to move the cursor in the X/Y direction so that it coincides with the defective pixel point. Press the left button to add the defective pixel selection, and press the left button again at the same position to delete the defective pixel selection;
- After the defective pixel is added, press the up button to choose whether to perform Pixel Defect Correction;

● Auto Display-Off

- In the Setting Menu, rotate the left knob to select Auto Display-Off;
- Turn the upper knob to switch between OFF/5min/10min/15min;

● Auto Power Off

- In the Setting Menu, rotate the left knob to select Auto Power Off;
- Rotate the upper knob to switch between OFF (default)/20min/40min/60min;

● Unit Switching

- In the Setting Menu, rotate the left knob to select Unit Switching
- Rotate the upper knob to switch between meters/yards;

● Time Setup

- In the Setting Menu, rotate the left knob to select Time Setup;
- Rotate the upper knob to switch between the setting items (year, month, day, hour, minute, and second), and rotate the right knob to change the value;

● Factory Reset

- In the Setting menu, rotate the left knob to select Factory Reset;
- Press the left button and follow the prompt on the pop-up interface to select whether to restore the device to its factory settings.

● Firmware Update

- In the Setting Menu, rotate the left knob to select Firmware Upgrade;
- Press the left button, and it detects the upgrade file and upgrades;

● Product Information

- In the Setting Menu, rotate the left knob to select Product Information;
- Product information includes the product model, software version number, hardware version number, PN code, SN code, and FCC ID;

14 Product Update and Description of App ▼

The LEAP series comes with a dedicated app. By connecting the device to the app on a mobile phone, tablet, or laptop you

can enjoy real-time image transmission, perform device operations, and receive program updates.

Download instructions for using the app from the official website (www.rix-nv.com).

Users have the option to update the firmware of the LEAP product by utilizing the app or downloading the latest version from www.rix-nv.com.

● About App

- You can download and install the app on the official website (www.rix_nv.com) or by searching RIX+ in an app store.



15 Product Maintenance ▼

Prior to using the device, it is important to conduct a thorough technical inspection to ensure the following items are in proper working condition.

- Prior to using the device, it is important to conduct a thorough technical inspection to ensure the following items are in proper working condition.
- To remove dust and dirt from the metal and plastic parts, use a cotton cloth and gently wipe the surface clean
- Make sure that the 18650 battery being used is free from any bulges or deformations and that the plastic cover is undamaged.

16 Troubleshooting ▼

Refer to the table below, which outlines potential issues that may arise during operation. For any product issues that can not be remedied or are not listed below, please contact the RIX Optics customer support by visiting our website at www.rix-nv.com.

Fault	Possible Causes	Solutions
The scope cannot be started.	The battery is out of charge.	Charging
The device cannot be powered by an external power supply	The USB cable is damaged.	Replace the USB cable.
	The external power supply is insufficient.	If necessary, check the external power supply.
The image is too dark.	The screen is not bright enough.	Adjust the display brightness
The image quality is poor or the detection range shortens.	These problems are likely to occur when you use the device in harsh weather (such as snow, rain, and fog).	
The device cannot connect to a mobile phone or computer.	The Wi-Fi password is incorrect.	Enter the correct password or reset the device back to factory setting.
	There are too many Wi-Fi networks in the range of the device, which may cause interference.	For a stable network connection, it is recommended to relocate the device to an area with a lower number of Wi-Fi networks.
Wi-Fi signals are lost or interrupted.	The device is beyond Wi-Fi coverage. There is blocking (such as concrete walls) between the device and the receiver.	Move the device to a place where you can receive Wi-Fi signals.
When the device is used at a low temperature, the imaging quality is poorer than that at a normal temperature.	<p>At temperatures above 0°C, the temperature rise varies with the observed objects (environment and background) due to different heat conductivity coefficients. As a result, high-temperature contrast occurs and the image quality is better.</p> <p>At low temperatures, the observed targets (background) usually cool down to a similar temperature because of reduced temperature contrast. Therefore, the image quality (details in particular) is poor, which is a characteristic of thermal imaging devices.</p>	

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