



# Owner's Manual

Impact Series Thermal Scope

TS150G3, TS250G2

DISCOVER THE UNSEEN.

[XVISIONOPTICS.COM](http://XVISIONOPTICS.COM)

## - CONTENTS-

|                             |    |
|-----------------------------|----|
| Important .....             | 1  |
| Welcome .....               | 2  |
| FCC Warning .....           | 4  |
| Precautions .....           | 6  |
| Package Contents .....      | 9  |
| About Impact Device .....   | 10 |
| Button Descriptions .....   | 11 |
| Function Description .....  | 16 |
| WIFI Hotspot Settings ..... | 16 |
| Icon Descriptions .....     | 22 |
| Troubleshooting .....       | 24 |
| Storage and Transport ..... | 25 |
| Spec Sheet .....            | 26 |



## - IMPORTANT -

Thank You for Choosing This product. Please read this guide before use and keep it for future reference. We hope you'll be satisfied with this product.

This guide is a general guide for a series of products, which means that the specific model you receive may differ from the picture in the guide. Please refer to the actual product you receive.

This user guide is organized for the convenience of users to use and understand our products. We will do our best to ensure the accuracy of the contents of this guide, however , we still cannot guarantee the completeness of the contents thereof. As our products are subject to continuous upgrading, we reserve the right to modify this guide from time to time without prior notice.

## - Welcome -

Thank you for purchasing an X-Vision Optics Impact Series Thermal Scope. X-Vision Optics' all-new Thermal Scope (The TS150G3 and TS250G2) redefines hunting. The Impact series thermal scopes provide both day and night use for hunting, scouting, and surveilling. The Impact series thermal scopes have been built to withstand any and all conditions. The Impact Series Thermal Scopes are multifunctional devices that can be used for both day and night target observation, and in any terrain. The unit has optional hotspot tracking which uses a small crosshair to pinpoint and follow the hottest object in its field of view, making it easy to detect game at long ranges, in dense terrains, and while on the run. Along with this, the scope has a stadia metric rangefinder, giving clarity on exactly how far away the target is. The picture in picture (PIP) feature allows the user to see the multiple views, In the adjustable subsets of the screens of TS250/TS150, there are magnification ratios of 3.3X, 4.9X, 6.6X, 8.2X, 9.9X, 11.5X, 13.2X and 2.4X, 3.6X, 4.8X, 6X, 7.2X, 8.4X, 9.6X respectively.

The device has ten reticle options along with **six** reticle color options. The unit can save **five** sets of zeroing data, allowing for quick and easy mounting on multiple firearms. This scope is capable of handling **over 54 ft/lb.** of recoil allowing compatibility with a large variety of firearms. Along with a multitude of included accessories, this thermal scope comes with **two** interchangeable rechargeable **18650** batteries, giving the user the ability to quickly change out batteries and never miss a shot.

The Thermal Scopes in our Impact Series (**TS150G3 and TS250G2**) emit their own Wi-Fi signal, which means multiple devices can be connected to the scope at the same time, so no need to rely on cellular data. This allows for a long-range connection giving devices the ability to connect to the scope up to **6 yards** away! The scope comes with free applications for both IOS and Android devices, allowing for pictures and videos to be saved on the connected device or on the 32GB of internal memory. The thermal scope is dust and water resistant to an International Protection Rating of **IP67**.

## - FCC WARNING -

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

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.

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

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 rating information is located at the bottom of the unit.

## - PRECAUTIONS-

### DANGER

- 1) Please charge the battery with the method described in this Guide and follow the charging procedure and precautions. Improper battery charging can cause heating, damage and even physical injury .
- 2) Do not open or disassemble the battery. If the battery leaks, do not touch the leaked fluid. If the leaked fluid gets in your eyes, rinse them immediately with clean water for at least 15 minutes and seek medical attention.

### WARNING

- Try to keep equipment stable and avoid violent shaking when in use to avoid damage.
- Do not use or store the device in an environment that exceeds the allowable operating temperature or storage temperature.
- Do not directly aim the device at high-intensity thermal radiation sources, such as the sun, lasers, spot welding machines, etc.
- Do not plug the device ports.

- Do not disassemble the machine by yourself. This may cause equipment damage and loss of warranty rights.
- Do not use soluble liquids on equipment and cables. This may cause damage to the equipment.
- Please do not use in environments that exceed the operating temperature of the device. This may cause damage to the equipment.
- Please observe the following measures when cleaning this device:
  - Non-optical surface: Use clean and soft cloth to wipe the non-optical surface of the thermographic camera.
  - Optical surface: When using the thermographic camera, please avoid polluting the optical surface of the lens. Avoid touching the lens with your hands, because the sweat on your hands will leave traces on the lens glass and may corrode the optical coating on the glass surface. When the surface of the optical lens is polluted, use a microfiber cloth to wipe it carefully.

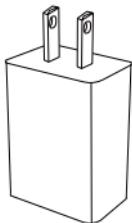
- Do not place the battery in a high temperature or near a high-temperature object.
- Do not short circuit the positive and negative poles of the battery.
- Do not expose the battery to moisture or water.



#### NOTES:

- 1) Do not expose the equipment to dust or moisture. Avoid water splashing on the equipment when being used in a wet environment. Cover the lens when not using the camera.
- 2) Please put the device and all accessories in the case when not in use.

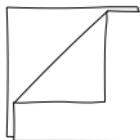
## - PACKAGE CONTENTS -



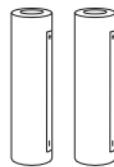
US adapters



Lens cover



Lens Cloth



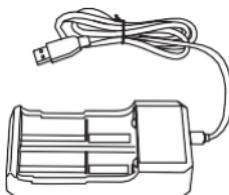
18650 Battery



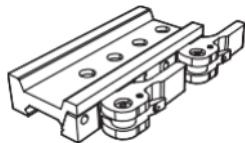
Allen key



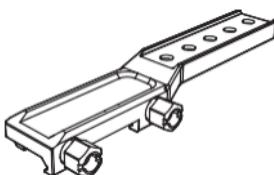
Type-C cable



Charger



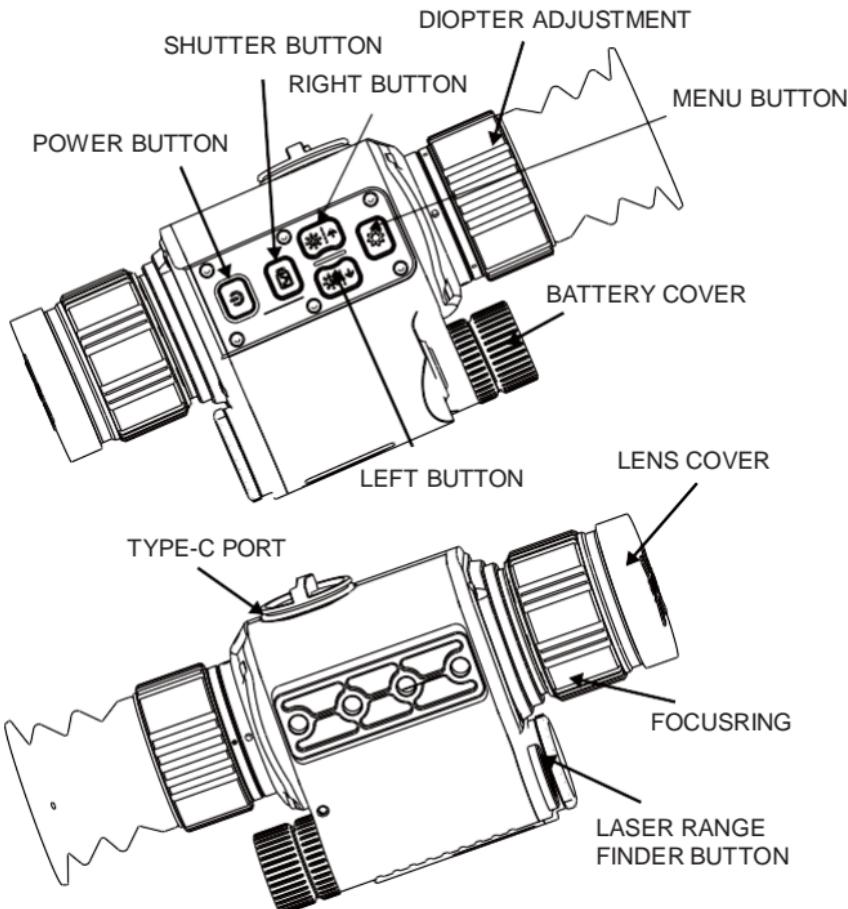
Quick Release Mount



Picatinny Mount

## - ABOUT IMPACT SERIES.

This Guide is applicable to many models of this series, but only one model is shown in the figure .



## - BUTTON DESCRIPTION -

| Buttons            | Current device status                   | Short press                  | Long press                    |
|--------------------|---|------------------------------|-------------------------------|
| Power on/of button | Power on (main interface)               | Display off                  | Power off                     |
|                    | Power off                               | /                            | Power on                      |
|                    | Display off                             | Display on                   | /                             |
|                    | Power on (menu interface)               | Return                       | /                             |
| Menu button        | Power on (main interface)               | Zoom in/out                  | Main menu                     |
|                    | Power on (menu interface)               | Select and confirm           | Return                        |
|                    | Reticle/zeroing settings in 'X' and 'Y' | Down to move Reticle slowly  | Down to move Reticle quickly  |
| Right button       | Power on (main interface)               | Adjusting Screen Brightness  | Turn PIP on/off               |
|                    | Power on (menu interface)               | Move down                    | /                             |
|                    | Reticle/zeroing settings in 'X' and 'Y' | Right to move Reticle slowly | Right to move Reticle quickly |

|                           |   |                             |                              |
|---------------------------|---|-----------------------------|------------------------------|
| Left button               | Power on (main interface)               | Switching Color Palette     | Calibration                  |
|                           | Power on (menu interface)               | Move up                     | /                            |
|                           | Reticle/zeroing settings in 'X' and 'Y' | Left to move Reticle slowly | Left to move Reticle quickly |
| Shutter button            | Power on (main interface)               | Photo                       | Video Recording on/off       |
|                           | Power on (menu interface)               | /                           | /                            |
|                           | Reticle/zeroing settings in 'X' and 'Y' | Down to move Reticle slowly | Down to move Reticle quickly |
| Laser range finder button | Power on (any interface)                | Distance measuring          | Switching Single/Scan mode   |

## BUTTON DESCRIPTION

### 1. POWER BUTTON

#### POWER ON:

Long- press the Power button until the boot screen appears in the eyepiece, indicating the device is turned on successfully .

#### POWER OFF:

- Manual power-off: Long-press the Power button to display the shutdown progress **bar and then press the manul button to confirm the power off.**
- Automatic power-off: If there is no button operation within the set automatic shutdown time, it will power off.

#### DISPLAY OFF:

**Short press the power button to enter the display off mode (when short press the power button is setting to the display off function)**

#### DISPLAY ON:

In Display off mode, press **the power button** to wake up the screen.

### 2. COLOR PALETTE:

When the device is turned on and the menu is not

called out, short press the left button to change the color palette.

### **ZOOM-OUT:**

When the device is turned on and the menu is not called up, press the menu button to move the menu or option.

### **3. BRIGHTNESS BUTTON**

When the device is turned on and the menu is not called out short press the right button to change the screen brightness.

### **4. DISTANCE MEASUREMENT BUTTON**

When the device is turned on press the rangefinder button to enter the rangefinder mode. Press and hold the Laser Range Finder button to switch between ranging modes (single ranging and continuous ranging). The single ranging mode is automatically turned off at a timed interval. Continuous ranging mode: short press the Laser Range Finder button to exit.

## 5. MENU BUTTON

### MAIN MENU:

When the device is turned on and the mean is not called up, long-press the Menu display the main menu.

### OK AND BACK/EXIT:

When the menu is called up, short-press the Menu button to confirm the current selection. Long-press the power/Menu button to return or exit the menu.

## 6. PHOTO BUTTON

### PHOTO:

When the device is turned on and the menu is not called up, short-press the shutter button to take a photo.

### VIDEO:

Long-press the **shutter** button to start recording, and long-press again to finish the recording.

## FUNCTION DESCRIPTION

- Picture in Picture (PIP):ON/OFF.
- Reticle type:There are **10** reticle types to select from.
- Reticle color: The reticle colors can be Black, White , **Rainbow**, Iron, Blue or Red.
- Reticle distance:The reticle distance can be adjusted from level 0 to 999.
- WiFi: When the device is connected to the mobile client, you can transmit real-time videos, access media files, and control the device remotely through the app.

## Crosshair Zeroing Calibration

### I. Preparation

1. Stable Shooting Position: Choose a stable shooting position to ensure the firearm remains steady during the shooting process.
- 2.Determine Zeroing Distance: Select a commonly used shooting distance as the zeroing distance (e.g., 100 yards, customizable by the user) and ensure the impact point is clearly visible at this distance.

### 3. Access the Crosshair Settings:

- Press the MENU BUTTON to enter the settings interface.
- Use the LEFT BUTTON / RIGHT BUTTON to scroll through the menu and find Reticle Zeroing.

- Press the MENU BUTTON to confirm and enter the crosshair settings.

#### 4. Set the Zeroing Distance:

- Use the LEFT BUTTON / RIGHT BUTTON to scroll through the menu and find Distance.
- Press the MENU BUTTON to confirm and enter the distance settings.
- Use the MENU BUTTON / SHUTTER BUTTON / LEFT BUTTON / RIGHT BUTTON to adjust the distance (e.g., 100 yards).
- Press the POWER BUTTON to confirm.

## II. Calibration Steps

1. Aim at the Target Center: Use the scope to aim at the center of the target.
2. Shoot and Record the Impact Point: Fire a shot at the target and observe the bullet impact point.
3. Access the Crosshair Settings Again: Open the reticle settings menu as described in the preparation steps.
4. Adjust the Zeroing Coordinates:
  - Use the LEFT BUTTON / RIGHT BUTTON to scroll through the menu and find X Y settings.
  - Press the MENU BUTTON to confirm and enter the coordinate adjustment settings.

- Use the MENU BUTTON / SHUTTER BUTTON / LEFT BUTTON / RIGHT BUTTON to adjust the X-axis and Y-axis positions so that the reticle center aligns with the recorded impact point.

5. Freeze the Image for Easier Adjustment (Optional):

- Use the LEFT BUTTON / RIGHT BUTTON to scroll through the menu and find Freeze.
- Press the MENU BUTTON to confirm and enter the Freeze settings.
- Use the LEFT BUTTON / RIGHT BUTTON to turn the Freeze function ON/OFF.
- Press the MENU BUTTON to confirm.

6. Customize Reticle Style and Color (Optional):

- Use the LEFT BUTTON / RIGHT BUTTON to scroll through the menu and find Type (Style) / Color.
- Press the MENU BUTTON to enter the style or color settings.
- Use the LEFT BUTTON / RIGHT BUTTON to choose the preferred style or color.
- Press the MENU BUTTON to confirm.

7. Exit and Save the Zeroing Settings.

### III. Zeroing Verification

1. Check Accuracy: After calibration, aim at the target through the scope again and verify that the aiming point aligns correctly.

#### IV. Multiple Zeroing Profiles

1. The system can store up to five zeroing profiles under Sub-profile 1, 2, 3, 4, and 5.
2. If Sub-profile 1 is set for 100 yards, but zeroing is needed for 50 yards, select Sub-profile 2 to save the new zeroing settings.
  - Use the LEFT BUTTON / RIGHT BUTTON to scroll through the menu and find Sub-profile.
  - Press the MENU BUTTON to enter the sub-profile settings.
  - Use the LEFT BUTTON / RIGHT BUTTON to select Sub-profile 2.
  - Press the MENU BUTTON to confirm.
3. Follow the Preparation, Calibration Steps, and Zeroing Verification process to save the new Sub-profile 2 zeroing settings.

#### WIFI Hotspot Settings

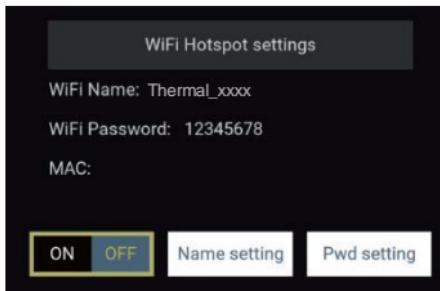
- Download the “X-Vision Optics Impact Series” app.



(Available on iOS and Android).

Find WiFi hotspot in the menu and pass the menu key to enter WiFi settings.

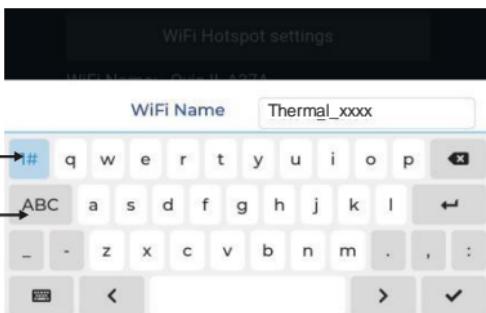
WiFi name, WiFi password, and MAC address can be found. When the hotspot is turned off, the name and password can also be set, as shown in the following figure.



Operation method: After entering WiFi hotspot settings, press the pseudo color key or brightness key (left or right) to select WiFi on/off, name settings, and password settings.

WiFi on/off setting: Press the menu key to set on or off.

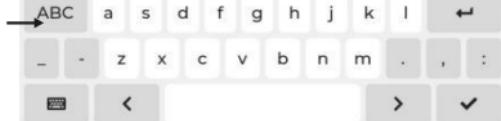
WiFi name and password settings: Press the menu key to enter, pseudo color key or brightness key (left or right), press camera key or menu key (up or down) to select letters. Select and press the power key to confirm. After the setting is completed, select "√" and press the power key to confirm and exit the name settings, as shown in the following figure.



Convert numbers and symbols



Convert letters (uppercase and lowercase)



# Connecting WIFI Hotspot

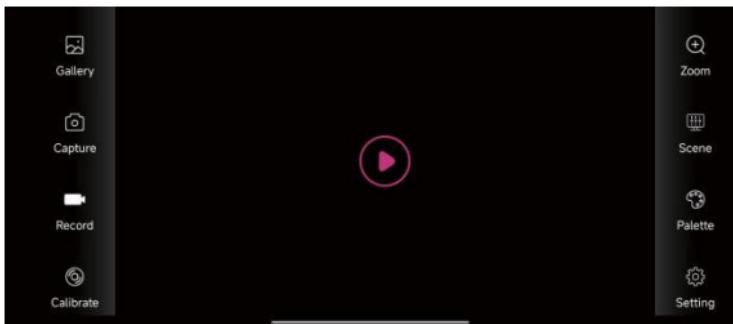
For IOS and Android system, please download the APP software.

The name of the APP is X-Vision Optics Impact Series.

Connect the device hotspot after the device is powered on.

The default connection hotspot name for this device is  
password: 12345678.

Open the APP software to enter the interface, the interface is  
displayed as follows:



“  ” Gallery, view pictures and videos.

When entering the picture list/video list, check the picture/video and click “  ” at the top right to delete or share the picture/video.

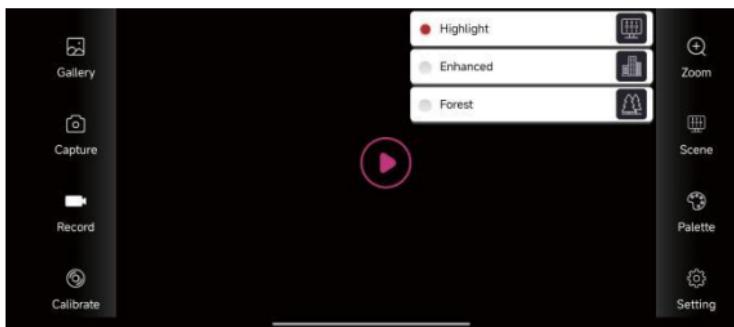
“  ” Snap the image.

“  ” Record, click this icon to record video, click again to end recording.

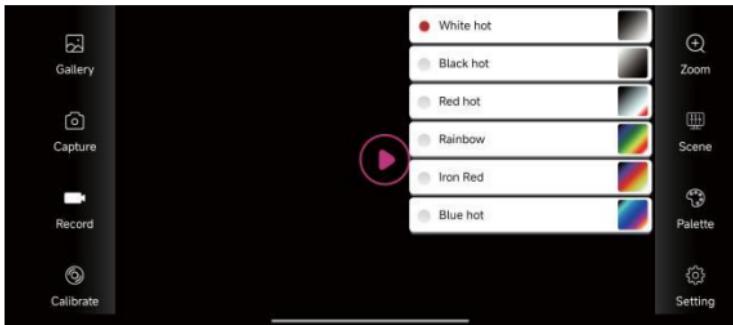
“  ” Refresh, refresh block.

“  ” Zoom, Can be enlarged

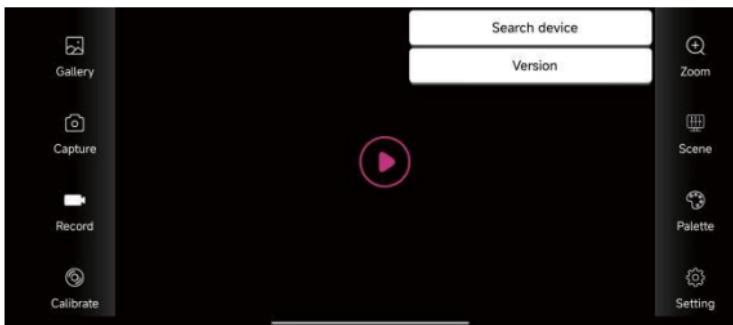
Click the “  ” icon to replace the scene. It can be set to standard, city, forest,custom,As shown below.



Click the “  ” palette icon, which can be set to White hot , Black hot, Red hot, Iron red, Blue hot or rainbow , six color palettes.



Click “” to setting icons, search device, view the version information.



Search device: Search the current device and automatically connect.

Version information: View version information.

Note: When the default hotspot is used for the first time, connect the default hotspot.

- Automatic power off: Automatic power off time can be set at 5/10/20/30min or do not turn off. If no operation is made within the set time, a power-off countdown will appear and the camera will shut down when it is complete.
- Time format: The time format can be 12H or 24H.
- Date format: The date format can be YYYY-MM-DD or MM-DD-YYYY or DD-MM-YYYY.
- Device info: APP update, reset param, format.

## - ICON DESCRIPTION -

| Icon  | Meaning                         | Icon  | Meaning                         |
|---|---------------------------------|---|---------------------------------|
|    | Battery level update            |    | Calibration Mode                |
|    | Charge                          |    | Settings                        |
|    | High capacity                   |    | Device info                     |
|    | Medium capacity high            |    | Time/Date                       |
|    | Medium low capacity             |    | Photo                           |
|    | Low capacity                    |    | Video                           |
|    | Battery low                     |    | Pixel Repair                    |
|    | Firearms                        |    | PIP                             |
|    | Reticle Zeroing/<br>Sighting In |    | Color Palette/<br>Reticle Color |
|    | Screen brightness               |    | CVBS                            |
|  | Image brightness                |  | WIFI Settings                   |
|  | Image contrast                  |  | Digital Zoom                    |
|  | Close PIP                       |  | Auto Shut off                   |

## -ICON DESCRIPTION-

| Icon  | Meaning                | Icon  | Meaning             |
|---|------------------------|---|---------------------|
|  | Forest                 |  | USB Connection      |
|  | Enhanced               |  | Memory Card Full    |
|  | Highlight              |  | 24 hours            |
|  | 12 hours               |  | Display View        |
|  | Hotspot                |  | Close Auto Shut off |
|  | Single                 |  | Continues           |
|  | Reticle Formats/Styles |   |                     |

## - TROUBLESHOOTING -

1. Device fails to start.

Solution: Replace the cell or connect the adapter for charging.

2. The device cannot take photos/record.

Solution: the internal storage space of the device is full. Format the memory card or offload media to resolve.

3. The device display time does not match the actual time display.

Solution: Reset the time and date in the device settings menu.

4. Screen goes out during use.

Solution: Short-press the power button to wake up the device from hibernation mode.

5. The image of the device is blurred during use.

Solution: turn the diopter adjustment to focus manually until the display is clear.

## - STORAGE AND TRANSPORT -

The following is the correct storage and transportation of the product. To prevent danger, property loss, etc., please read the manual carefully before using the device. Strictly observe it, and keep the instruction properly after reading it.

### Storage:

1. The device should be stored in a well-ventilated, clean, condensation-free and corrosive gas-free room with temperature of -22F ~ 140F, and relative humidity not exceeding 95%.
2. Please charge the device once every 3 months to prevent deterioration.

### Transport:

During transport, the device should be protected against water, falling, and any severe vibration or impact.  
Handle with care

## 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.

## - Spec Sheet -

| Impact             |   |              |
|--------------------|---|--------------|
|                    | TS150   | TS250        |
| Magnification      | 2.4 to 9.6X   | 3.3 to 13.2X |
| Thermal Sensor     | 384x288   |              |
| Pixel Size         | 12µm  |              |
| Frame Rate         | ≤50HZ   |              |
| Objective Lens     | 25mm  | 35mm         |
| Field of View      | 7.53°*5.65°   | 10.53°*7.90° |
| Detection Range    | 1913yds   | 1367yds      |
| Recognition Range  | 479yds  | 342yds       |
| Hotspot Tracking   | YES   |              |
| Rangefinding       | YES   |              |
| Picture in Picture | YES   |              |
| NETD               | ≤30mk   |              |
| Display Resolution | 1024x768 OLED   |              |
| Reticle            | 10 Options  |              |
| Color Palettes     | 6   |              |
| Power Supply       | Rechargeable 18650 3.7v Lithium-Ion (1incl.)  |              |
| Battery Life       | ≤6 Hours  |              |
| IP Rating          | IP67  |              |
| Dimensions(ft)     | 0.7*0.3*0.2   |              |
| Weight             | 1.4 Pounds  |              |
| Internal Memory    | 32G   |              |
| Mount              | Quick Release Mount, Picatinny Mount (Both)   |              |
| Wi-Fi Capability   | YES   |              |
| Photo and Video    | YES   |              |
| Applications       | YES   |              |
| Accessories        | Dual Battery Charger, Charger Cable, Quick Release Mount, Picatinny Mount, Lens Cloth, Lens Cap, 2 Batteries, Carrying Case, Allen Wrench |              |



## Contact Us

5140 Moundview Drive  
Red Wing, MN 55066 USA

(833) 993-2383 (US)  
(651) 385-2276 (Canada)  
[support@xvisionoptics.com](mailto:support@xvisionoptics.com)

**DISCOVER THE UNSEEN.**

[XVISIONOPTICS.COM](http://XVISIONOPTICS.COM)