

**ATHLON**  
RIDICULOUSLY GOOD OPTICS

# CRONUS ATS THERMAL SCOPE

50-640 | 50-400 | 35-400



**USER MANUAL**

[athlonoptics.com](http://athlonoptics.com)

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## DISCLAIMERS

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This product is for civilian use only and shall not be used for infringing the rights of third parties, medical, safety equipment or other applications where product failure may cause danger to life or personal injury. In the event of a conflict between the foregoing and applicable law, the law shall prevail.

## IMPORTANT INSTRUCTIONS

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This manual is a general manual for a series of products, which means that the product of a specific model you receive might differ from the picture herein. Please refer to the actual product received.

This user manual is prepared for the convenience of users to use and know our products. We have tried our best to ensure the accuracy of its contents, but we are still unable to guarantee its completeness since our products can be continuously updated and upgraded. Athlon Optics reserves the right to modify the manual at any time without notice.

## CAUTIONS

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### DANGER

- 1) Please charge the battery with the method described in this guide and follow the charging procedure and precautions. Improper battery charging will cause heating, damage and even physical injury.
- 2) Do not try to open or disassemble the battery at any time.
- 3) The internal battery can only be charged through the USB-C port and the external battery does not charge the internal battery. The optic draws current from external battery first and the internal battery when external one runs out power.

### WARNING

- 1) This scope contains advanced electronics. To prolong the life of this optic, avoid any undue physical damage or violent actions.
- 2) Do not use or store the equipment in an environment that exceeds the allowable operating or storage temperature.
- 3) Do not directly aim the equipment at high-intensity thermal radiation sources, such as the sun, lasers, spot welding machines, etc.
- 4) Avoid allowing debris to enter any ports in this optic.
- 5) Do not knock, throw or vibrate instruments and accessories to avoid damage.
- 6) Any modification, alterations or attempts to disassemble this scope will void the user's warranty. All repairs must be made through Athlon Optics.
- 7) Avoid contaminating this scope with oils or solvents.
- 8) Please observe the following measures when wiping this Scope:
  - Non-optical surface: Use a clean and soft cloth to wipe the non-optical surface of the thermal scope.
  - Optical surface: When using the thermal scope, avoid contaminating the optical lens surfaces of this scope. Avoid touching the objective lens with your hands. Oils and solvents can degrade the lens coatings. When the surface of the optical lens is polluted, use special lens paper to wipe it carefully.
- 9) Do not place the battery in a high temperature or near a high-temperature object.
- 10) Do not short circuit the positive and negative poles of the battery.
- 11) Do not expose the battery to moisture or water.
- 12) Only use the original chargers and adapters provided with this scope.

## CHAPTER 1 - PRODUCT INTRODUCTION

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Athlon Optics thermal scope retains the appearance of a traditional daylight scope and perfectly incorporates latest premium thermal imaging technology. The design of this scope accommodates traditional hunters' habits of handling the scope and rifle. ATS series adopts 400x300/640x480 12 μm high- sensitivity thermal detector with two different lens options of 35mm, 50mm, and its 10 sets of zero profiles that make it convenient to switch between different calibers of rifles.

## CHAPTER 2 - STORAGE AND TRANSPORTATION

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In order to prevent danger and property loss, please read this manual carefully before using the scope and strictly abide by it during its use.

### STORAGE

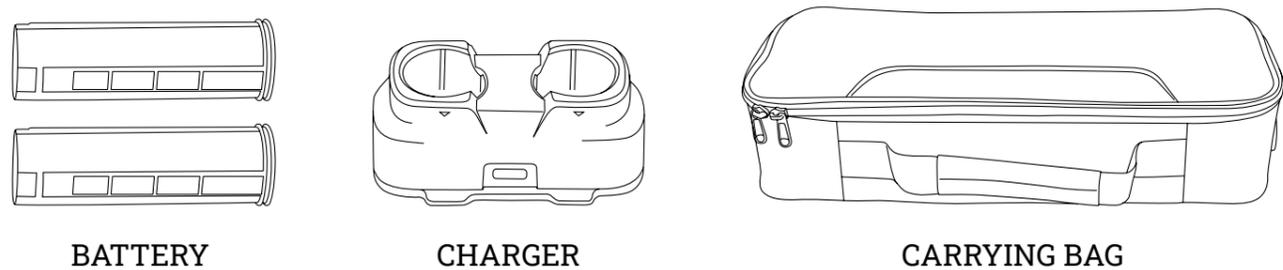
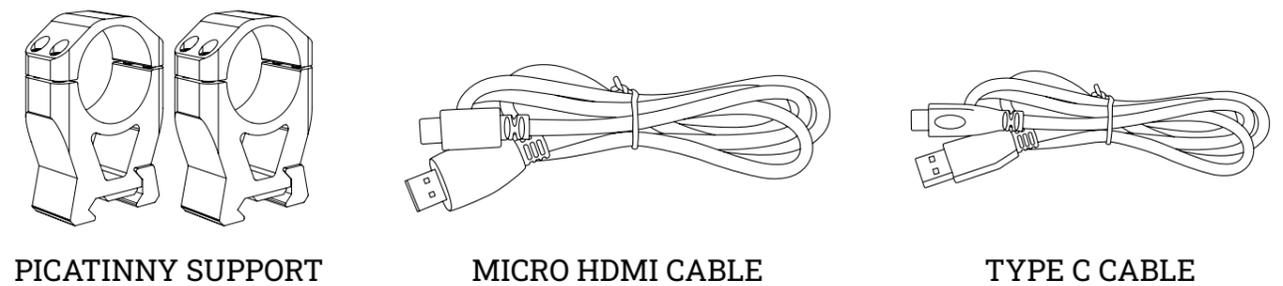
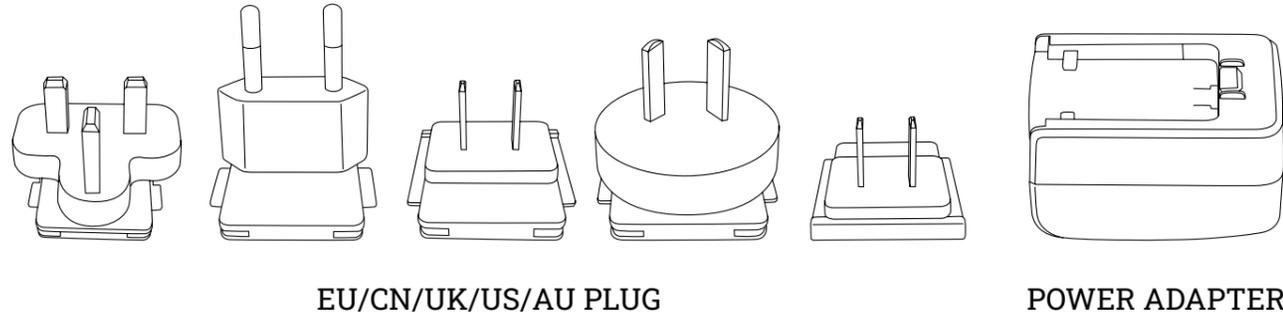
- 1) The packaged product shall be stored in well-ventilated and clean rooms at -22°F ~ 122°F (-30°C - 50°C), without condensing or corrosive gas, under relative humidity of no more than 95%.
- 2) Please regularly charge it every 3 months.

### TRANSPORTATION

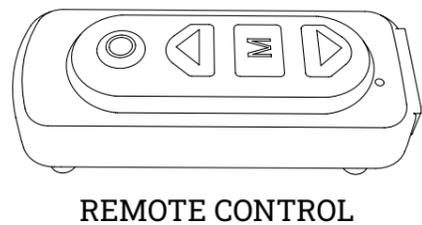
The product shall be protected from rain and water. This optic contains advanced electronics. To prolong the life of this optic, avoid any undue physical damage or violent actions.

## CHAPTER 3 - LIST OF ITEMS

### Standard items include



### Optional accessories



## CHAPTER 4 - TECHNICAL SPECIFICATION

Product Name		Thermal Imaging Rifle Scope		
Model		35 - 400	50 - 400	50 - 640
Detector	Total Resolution	400×300 @12μm		640×480 @12μm
	Scope Material	Aluminum		
	Effective Resolution	400×300		640×480
	Spectral	8-14μm		
Lens	Focal length	35mm F1.0	50mm F1.0	50mm F1.0
	Focusing	Manual		
	FOV	7.8° × 5.9°	5.5° × 4.1°	8.8° × 6.6°
Image	Frame Rate	50Hz		
	Electronic Amplification	1x - 4x		1x - 8x
Power	Battery	1×18650 (Internal) + 2× Customized Battery (External)		
	Charging	Chargeable, USB-C		
Scope Interface	USB	USB-C (2.0) can power the Scope and charge both internal and external battery; can transmit data		
	Video Interface	Micro HDMI		
	WIFI	Realtime video transmission, 2.4G frequency range,		
	Bluetooth	Bluetooth remote control, which can connect to Scope for wireless control		
	External Extension	External monitor through USB-C		
	Tube Diameter	30mm		

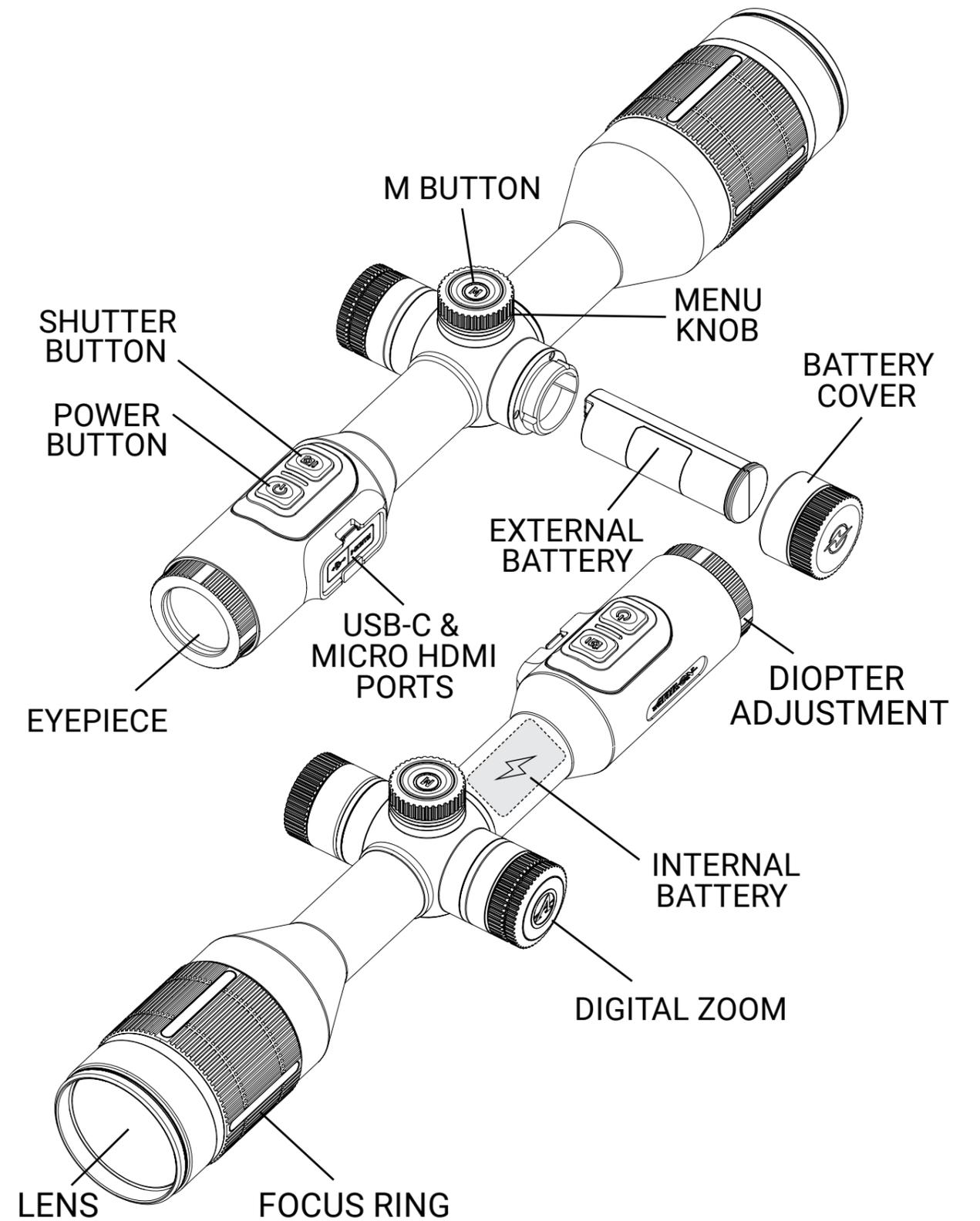
Product Name		35 - 400	50-400	50-640
Display System	OLED	0.39 Inches OLED		
	Resolution	1440x1080,Full screen display		
	Diopter	-4 - +4		
	Distance of exit pupil	48mm		
	Diameter of exit pupil	8mm		
	Eyepiece magnification	14×		
	Scope Magnification	2.3x - 9.2x	3.2x - 12.8x	2.8x - 22.4x
	Video Output Standard	HDMI		
Button	Power on/off	Yes		
	Menu knob (pressable)	Yes		
	Photo/Recording	Yes		
	Zoom-in knob	Yes		
Function	Linear Magnifying	Yes		
	Screen Brightness	5 levels		
	Detector Brightness	10 levels		
	Detector Contrast	10 levels		
	Image Enhancement	Yes		
	Scene Mode	Enhanced, Detect, Standard		
	Stadiametric Rangefinder	Yes		
	Eco Mode	Yes		
	Photo Capturing	Yes		
	Video Recording	Yes, through both Scope and APP		

Product Name		35-400	50-400	50-640
Function (Continued)	Video Recording with Audio	yes, through APP only		
	Color Palettes	White Hot, Black Hot, Adjustable Red Hot, Green Hot, Iron Red, Blue Hot		
	Hotspotting Track	Yes		
	Compensation Mode	Scene Compensation / Shutter Compensation		
	Automatic Power-off	Off, Automatic power-off in 15/30/60 minutes		
	Auto Sleep	Off, Auto sleep in 5/10/15 minutes		
	Charging Indicator Light	Light that indicates if scope is charging		
	Language Settings	English/French/German/Italian/Spanish		
	Time Settings	Yes		
	Watermark Settings	Yes		
	PIP	Upper Left/Upper Middle/Upper Right, Closed		
	Restore Default	Yes		
	Internal Memory	Yes, can be formatted (64GB capacity)		
	Unit of Measurement	Meter/Yard		
	Bluetooth	Yes		
	Zero Setting	50m/100m/200m/300m/500m 50y/100y/200y/300y/500y		
	Reticle type	10 types in total		
	Reticle color	Black/White/Yellow/Green/Red/Blue		
	Reticle Brightness	10 levels		
	One Shot - Zero in	Yes		
Screen Freeze for Zero in	Yes			
Firmware Upgrade	Yes			

Product Name		35 - 400	50 - 400	50 - 640
System	Power-on Time	≤12s@77°F ≤12s@25°C		
Environment Adaptation	Working Temperature	-22°F ~ 122°F (external power supply only below -4°F) -30°C ~ 50°C (external power supply only below -20°C)		
	Storage Temperature	-49°F ~ 158°F -45°C ~ 70°C		
	Humidity	10% - 95% no condensing		
	Impact	800G/1ms		
	Vibration	10Hz - 150Hz - 10Hz 0.15mm IEC60068-2-6		
	Dust-proof / Water-proof	IP67		
	Certificate	RoHS, CE, FCC, UKAC, UN 38.8		
Package	Items Included	Thermal Scope, USB-C cable, Eyepiece Rubber Cover, 5V2A adapter (US/EU/AU/EU), External Battery ×2, Battery charger, micro HDMI video cable, Scope Ring, Manual, Warranty Card		
	Color	Black		
	Weight	35.3 oz		
	Dimensions	14.3" x 4.2" x 2.7"	14.7" x 4.2" x 2.7"	

## CHAPTER 5 - PRODUCT COMPONENTS

This manual is applicable to many models of this series, and the illustration may not perfectly match your product.



## CHAPTER 6 - OPERATION INSTRUCTION

### 6.1 QUICK START

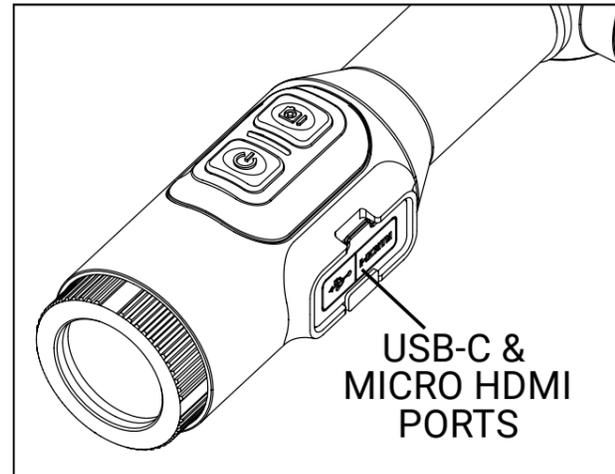
#### 6.1.1 USB TYPE C & MICRO HDMI

##### • USB TYPE C INTERFACE

The external port with USB cable can be connected to the external power supply to charge the internal and external battery of the product. The output of the external power supply is 5V2A.

##### • MICRO HDMI

A micro HDMI to HDMI cable can be connected to the optic to provide a live feed to an external monitor equipped with HDMI.



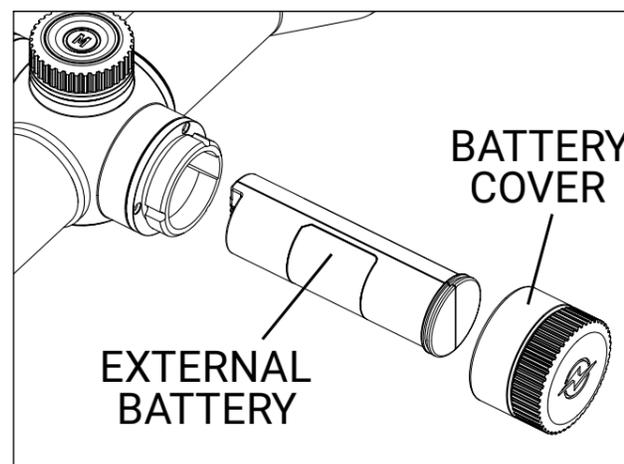
#### 6.1.2 POWER SUPPLY

##### • POWER CHARGING

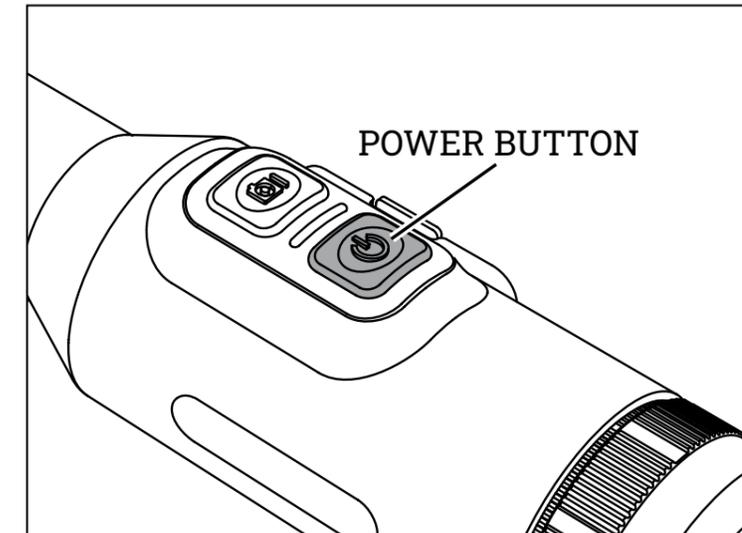
When using the product for the first time, be sure to charge the Scope for at least 4 hours. When charging, please leave the USB cover open, use the provided Type C USB charging cable and power adapter. The charging indicator light stays red, then turns green when charging is completed.

##### • BATTERY COVER

To install or remove the battery, please remove the battery cover on the right side. Please insert the battery in the direction shown in the figure, do not force the battery in.



#### 6.1.3 POWER BUTTON



##### • POWER ON

Long press and hold the power button until the startup picture appears in the eyepiece. If internal battery is completely discharged, the Scope can not be turned on with external battery only, and can be turned on with external power supply through USB-C port.

##### • POWER OFF

**a.** Manual power-off: long press and hold the power button, the power-off progress bar will be displayed, and the power-off is completed after the progress bar is finished.

**b.** Automatic power-off: in the set automatic power-off time, without any button operation, the scope will power down.

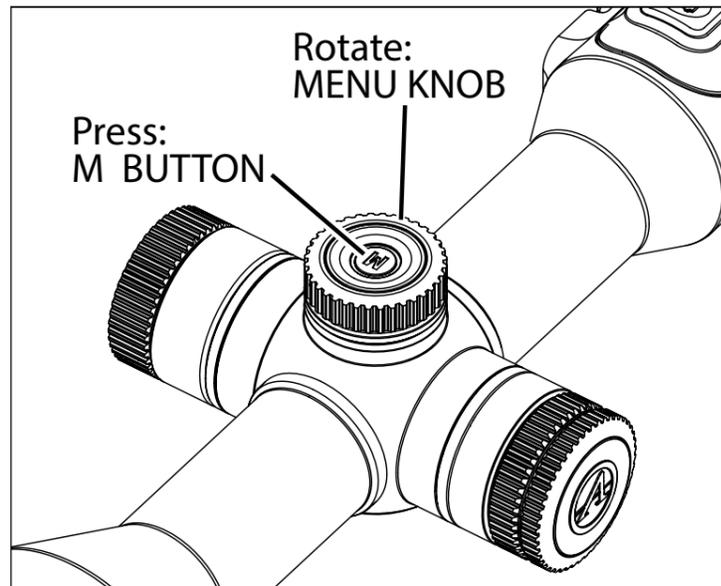
##### • DISPLAY ON

In display off mode, press any button to wake the screen.

##### • DISPLAY OFF

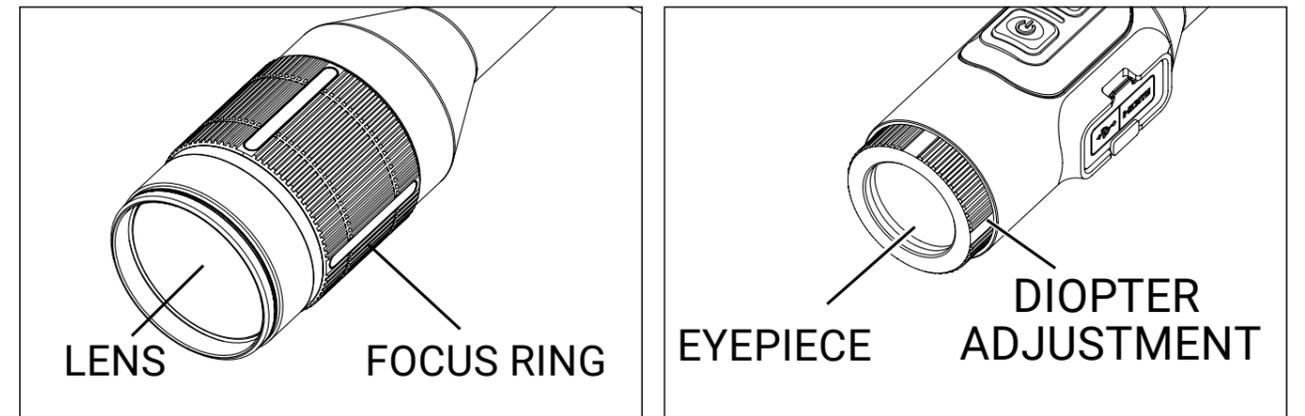
Press and hold the power button, the progress bar of power-off will be displayed. Before the progress bar is finished, release the power-off button to cancel the power off process and activate the display off mode.

## 6.1.4 LANGUAGE SETTINGS



When the scope is powered on for the first time to select the language, rotate the "Menu Knob" to scroll up and down to select the language; Short press the "M Button" to confirm the language selection and jump to the Home interface; long press The "M Button" to return to the language scrolling selection.

## 6.1.5 FOCUSING



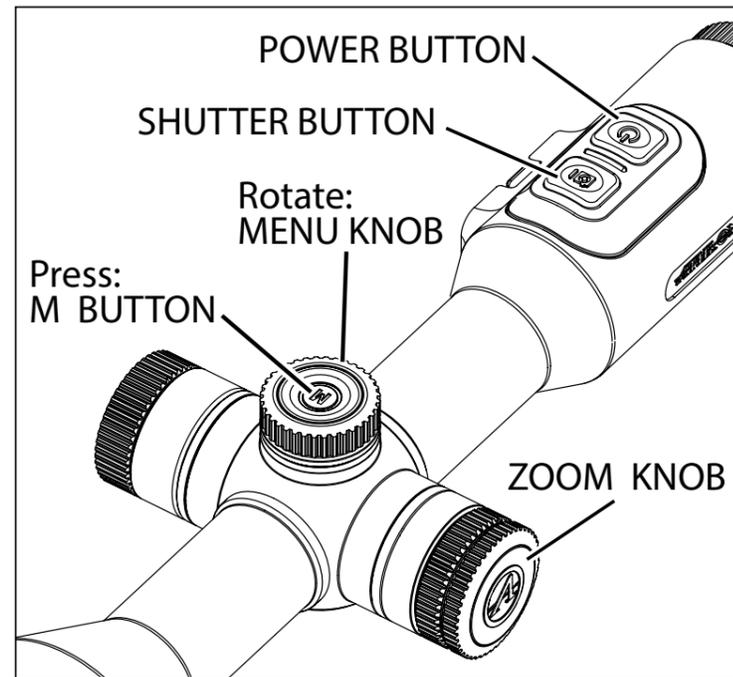
### • DIOPTER ADJUSTMENT

After the thermal scope is powered on, rotate the diopter adjustment knob to correct differences for each individual's eye sight until a clear image is observed.

### • FOCUS

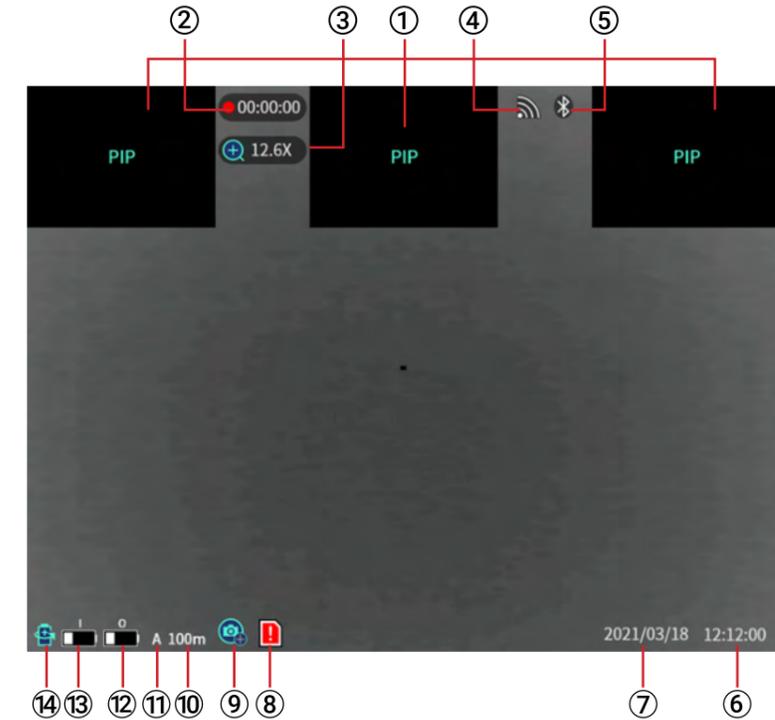
After the thermal scope is powered on, rotate the focus ring until the target image becomes clear. Repeat this step when distance to the target changes.

## 6.2 BUTTON DESCRIPTION



Button	Current device status	Rotation	Short Press	Long Press
Power Button	Power on	/	Compensation	Display off/Power Off
	Power off	/	/	Power on
	Display off	/	Display on	/
Menu Knob	Menu not activated	Switch to color palettes	/	/
	Menu activated	Toggle options	/	/
M Button	Menu not activated	/	Shortcut menu	Main Menu
	Menu activated	/	Select current option	Return to previous option
Zoom Knob	Menu not activated	Zoom	/	/
		/	Quick Zoom	/

## 6.3 HOME SCREEN LIST



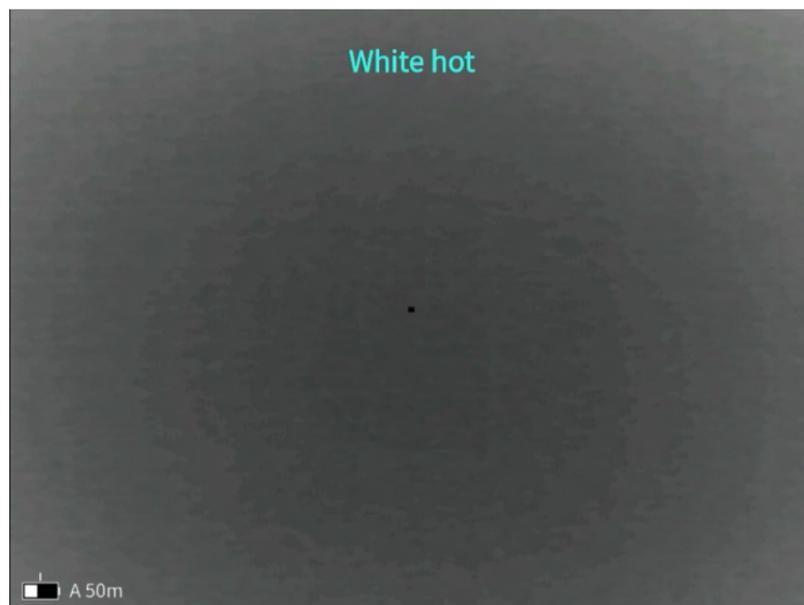
- 1) PIP: left top, middle top, right top display
- 2) Recording duration
- 3) Magnification power
- 4) WiFi connected
- 5) Bluetooth on
- 6) Time
- 7) Date
- 8) Internal memory full warning
- 9) Recording mode indication
- 10) Zero in distance
- 11) Zero profile
- 12) External battery capacity indication
- 13) Internal battery capacity indication
- 14) Eco-mode on

## CHAPTER 7 - FUNCTION DESCRIPTION

### 7.1 QUICK START

#### • MENU KNOB

Quick color palette switching: when it is turned on and the menu is not activated, turn the menu knob counterclockwise to switch between white hot, black hot, adjustable red hot, iron red, blue hot, and green hot pseudo color in turn.



#### • ZOOM KNOB

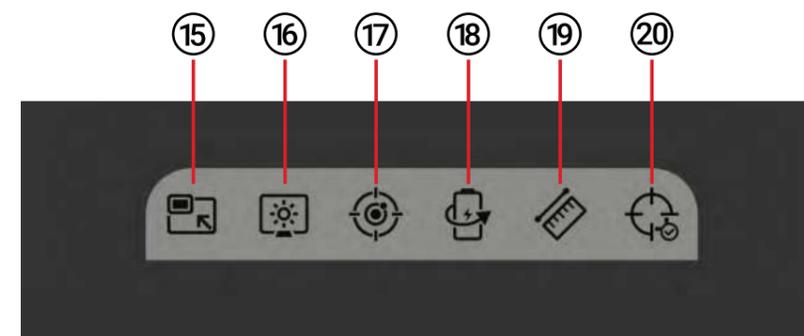
When it is turned on, rotate the zoom knob in the ZOOM-IN direction to enlarge the image, rotate the zoom knob clockwise to enlarge the image in 0.1X steps, and zooming stops when the maximum magnification is reached. Rotate the zoom knob in the ZOOM-OUT direction to shrink the image, rotate the zoom knob counterclockwise to shrink the image by 0.1X, and stops when it reaches the minimum value.

#### • QUICK ZOOM

The quick zoom can be obtained by short-pressing the button on the zoom knob.

#### • SHORTCUT MENU

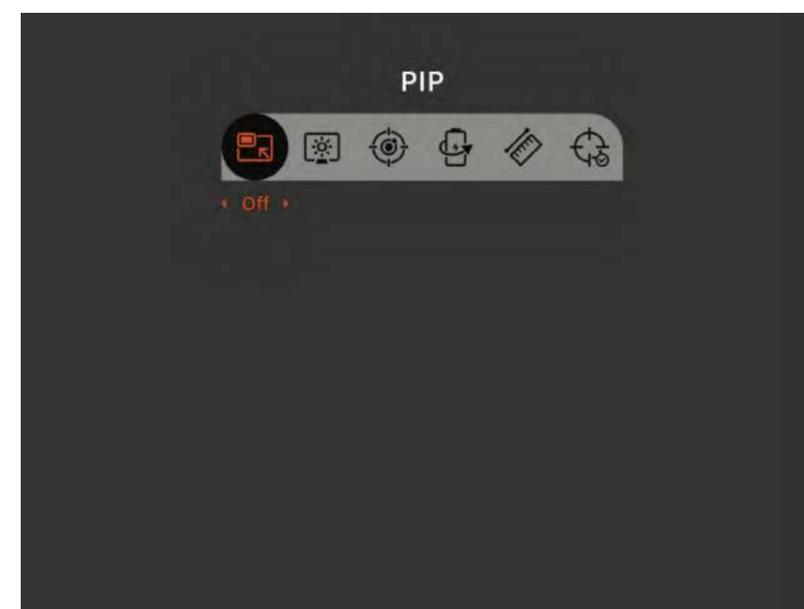
When the power is turned on and the menu is not activated, short press the "M Button" to display the shortcut menu options.



#### ⑮ PIP



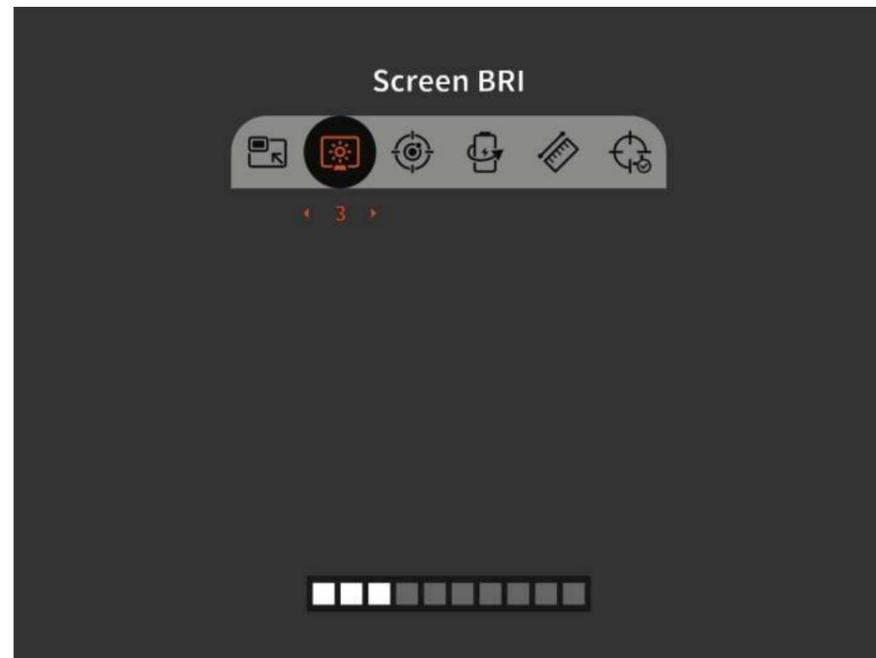
After Picture in Picture is turned on, there are three PIP positions to choose from: upper left, upper middle, and upper right.



### 16 SCREEN BRIGHTNESS



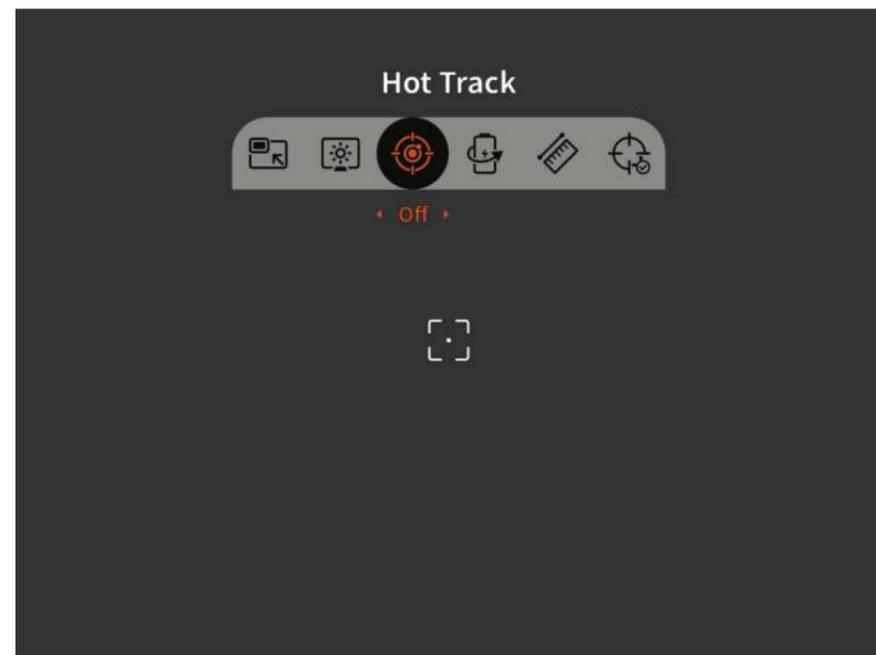
Screen brightness can be adjusted a total of 1-10 levels.



### 17 HOT TRACK



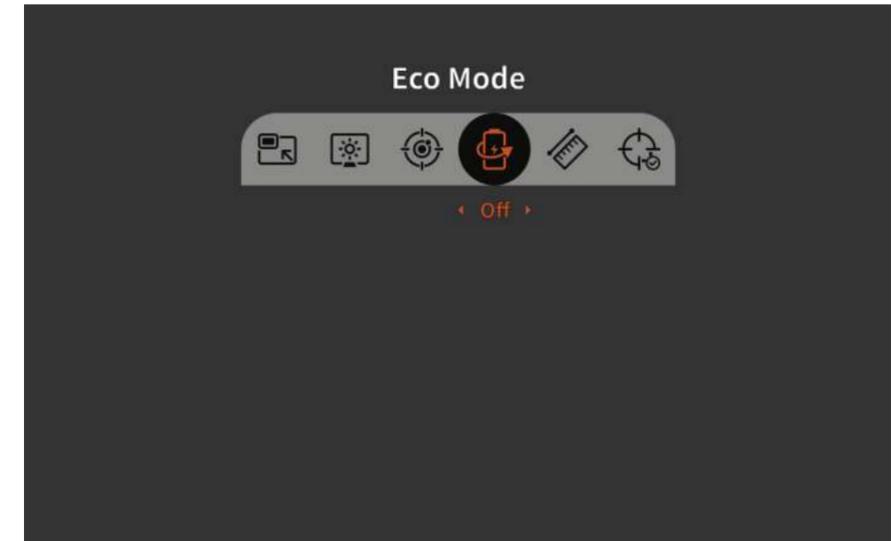
When hot track is turned on, a white box cursor is displayed to automatically track the highest temperature spot in the entire field of view.



### 18 ECO MODE



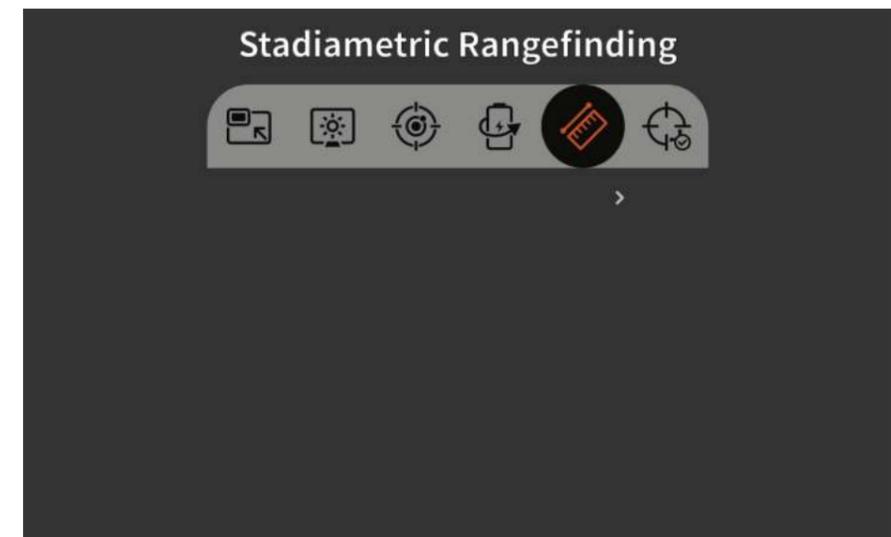
After being turned on, the scope will switch to power-saving mode, under which OLED brightness will be fixed to 20% and cannot be adjusted, and WIFI will not be turned on. If the current WIFI is already on, WIFI will be turned off, and the shooting record function cannot be turned on. If you are currently in shooting recording mode, the prompt is turned off. Zeroing distance: the current zeroing distance can be adjusted quickly.



### 19 STADIAMETRIC RANGEFINDER



The position of the lower horizontal line remains unchanged and rotate the Menu knob to move the upper horizontal line until the spacing between the two lines is equal to the image height of the target. The distance from the target can be estimated by referring to the approximate ranging values of the four animals (rabbit - 14", coyote - 21", wild boar - 30", and deer - 36") in the upper left corner.



## 20 ZEROING DISTANCE

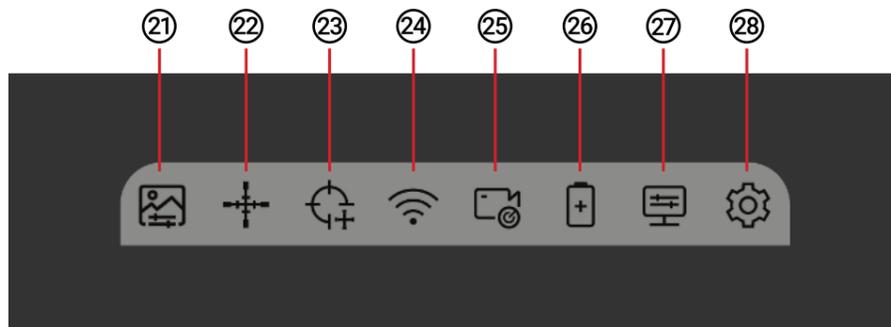


Zeroing distance can be adjusted and stored at distance of 50, 100, 200, 300, 500 in yard or meter. The shortcut menu offers quick access to choose from the presetted five distances.



## 7.2 MAIN MENU OPERATION

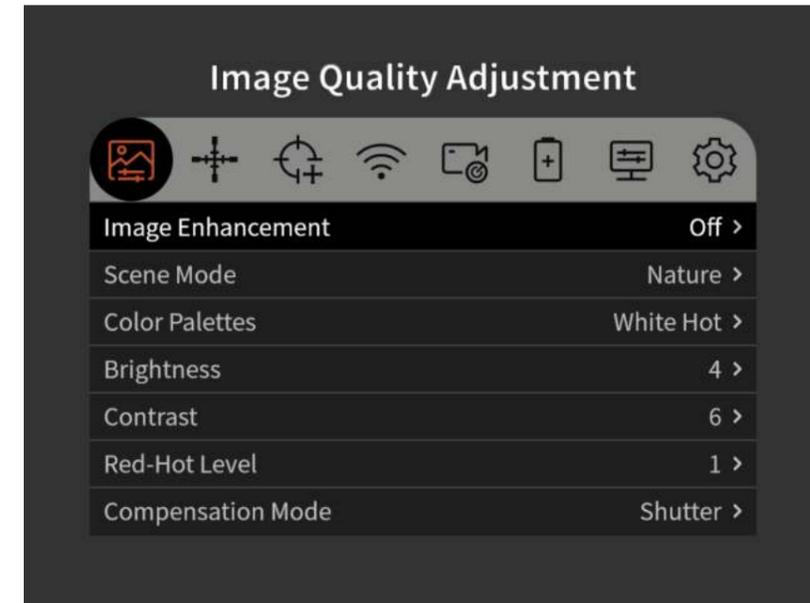
After scope is turned on, long press M Button to activate main menu, exit, and go back to main category level after saving a setting change. Short Press M Button to select a category or a setting, and save changes and exit a setting. Rotate Menu Knob to cycle through categories, individual settings, and values of individual settings. Main menu stays on and turns off if no any input is made within 12 seconds, long press M Button to reactivate it.



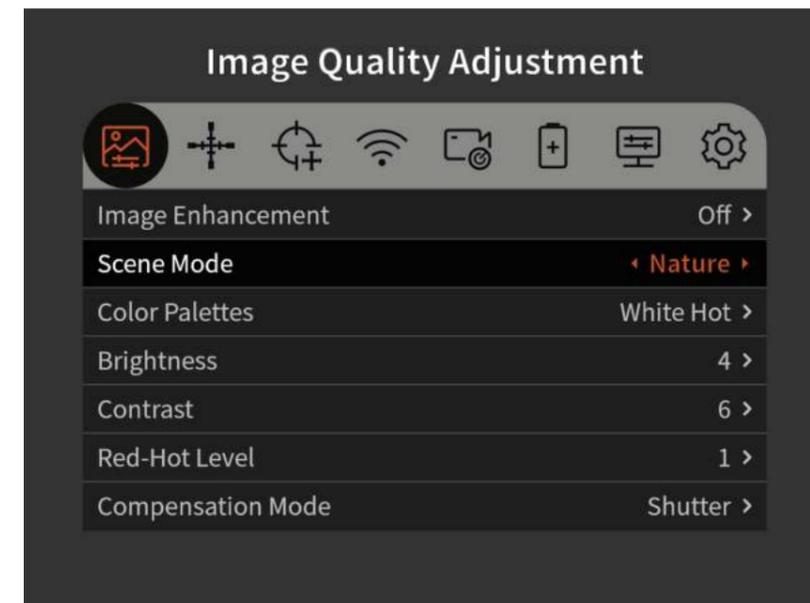
## 21 IMAGE QUALITY ADJUSTMENT



**Image Enhancement:** Turn on to enhance the image quality.



**Scene Mode:** Three scene modes, natural/enhanced/highlight, can be set.



**Color Palettes:** Can be set in white hot/black hot/adjustable red hot/iron red/blue hot/green hot.



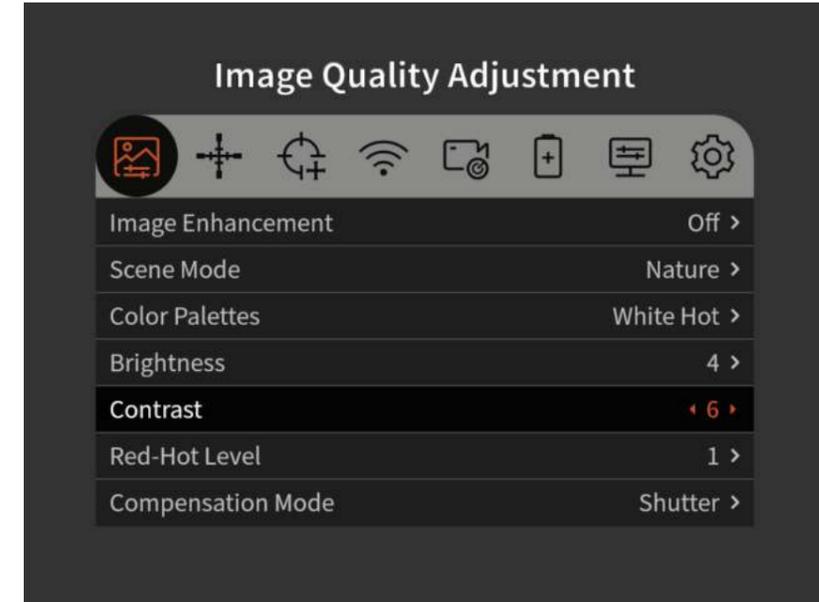
**Brightness:** Detector brightness can be adjusted within 1-10 levels.

**NOTE:** The value of adjusted brightness will be saved in the current scene mode.



**Contrast:** Contrast can be adjusted within 1-10 levels.

**NOTE:** The value of adjusted contrast will be saved in the current scene mode.



**Red Hot Level:** Red hot level can be adjusted within 1-10 levels.

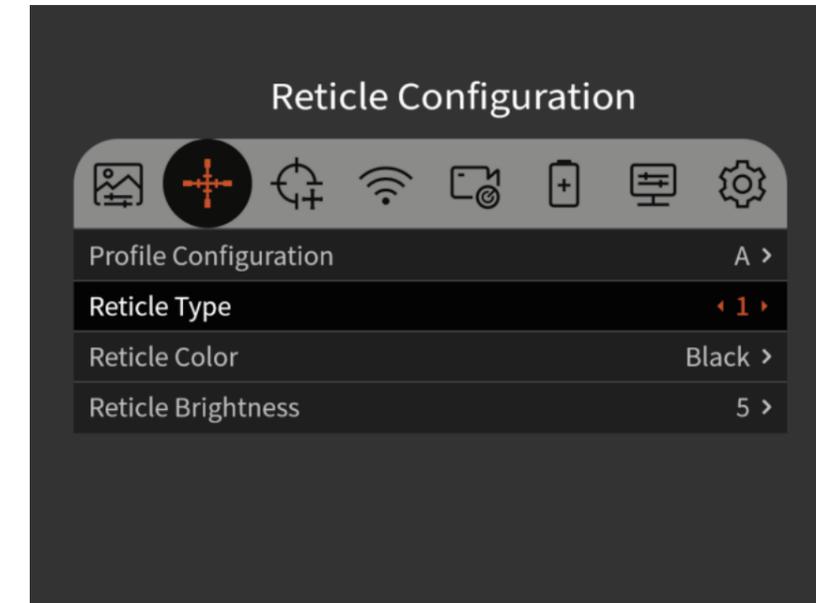
**NOTE:** When entering the red hot level, the image is switched to red hot in real time, and when exiting, it returns to the original color palette. The value of the red hot level is saved in the current scene mode.



**Compensation Mode:** Scene/Shutter Mode can be set through the Main Menu. Scene Mode sets short pressing the power button to capture an even temperature surface to refresh the thermal sensor. The best way to perform Scene Mode compensation is doing it with the lens cap closed. Shutter Mode sets short pressing the power button to close the device shutter and create an even temperature surface to refresh the thermal sensor.



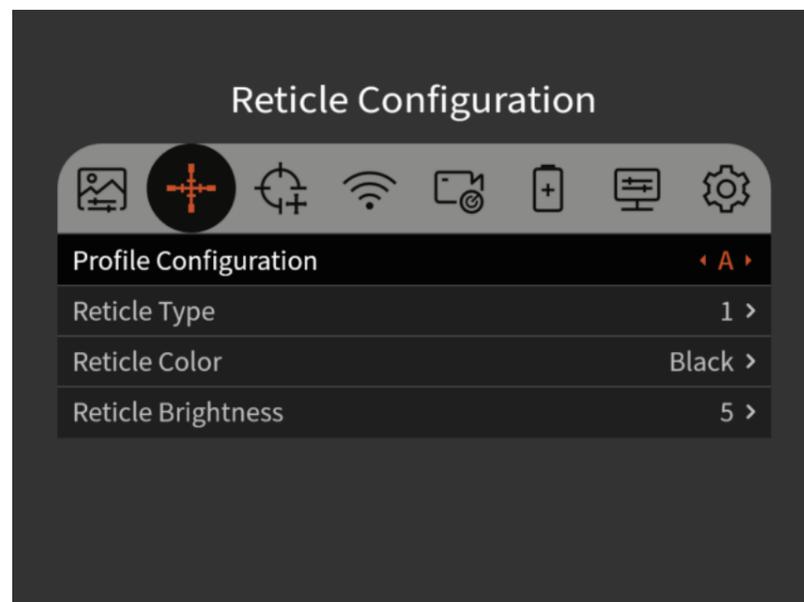
**Reticle Type:** 10 reticle types in total can be selected. For details, please refer to Chapter 8.



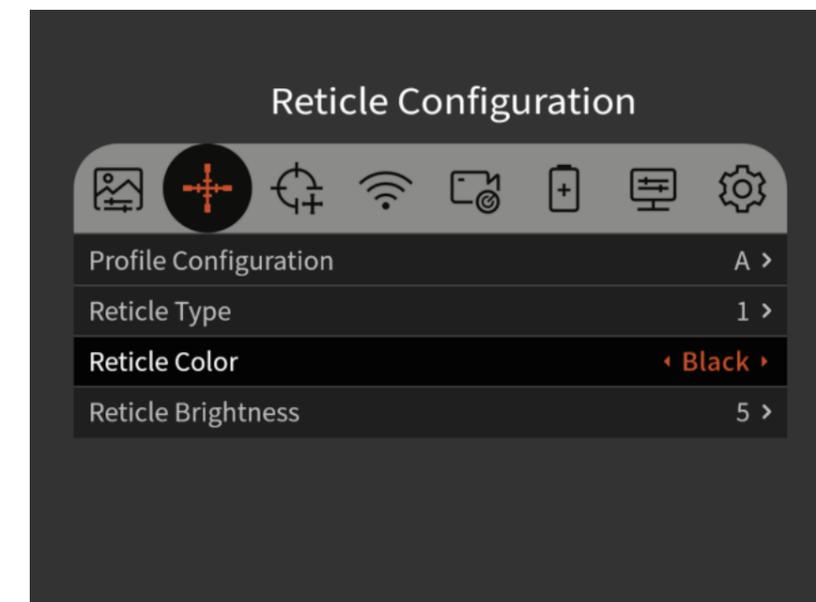
22 RETICLE SETTINGS



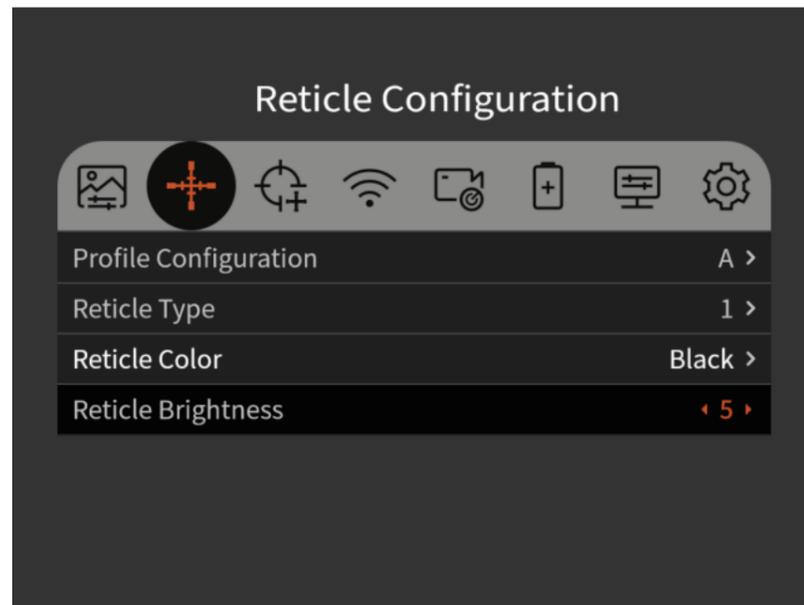
**Profile Configuration:** 10 profiles of zero parameters can be saved: reticle types, reticle color, reticle brightness, zeroing distance, and zeroing locations.



**Reticle Color:** Can be selected in black/white/yellow/green/blue/red, 6 types in total.



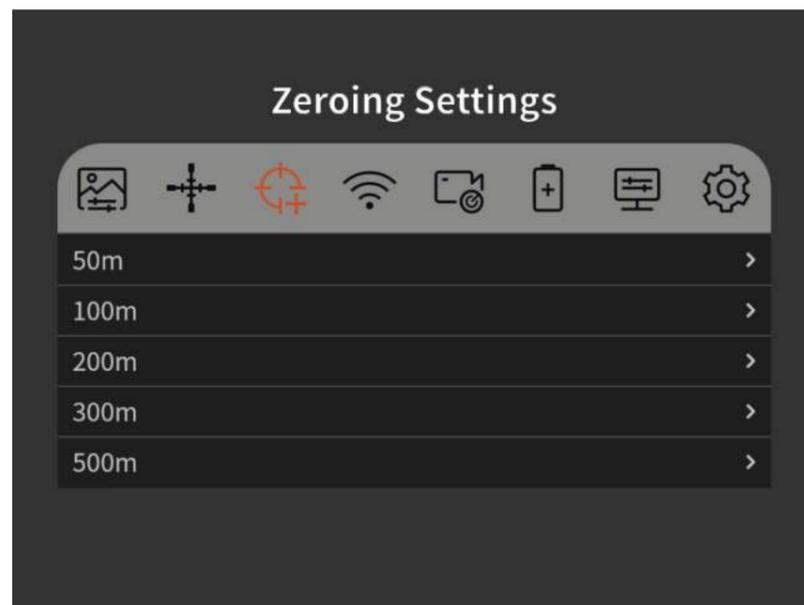
**Reticle BRI:** Reticle BRI can be adjusted within 1-10 levels.



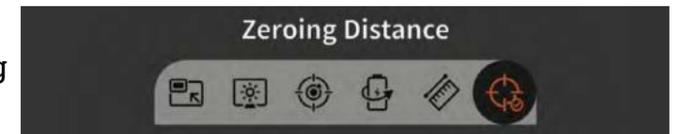
**23 ZEROING SETTINGS**



**Zeroing Settings:** Set zeroing distance at 50, 100, 200, 300, 500 yard or meter, freeze first point of impact screen shot, edit X, Y values, confirm and save zero position.

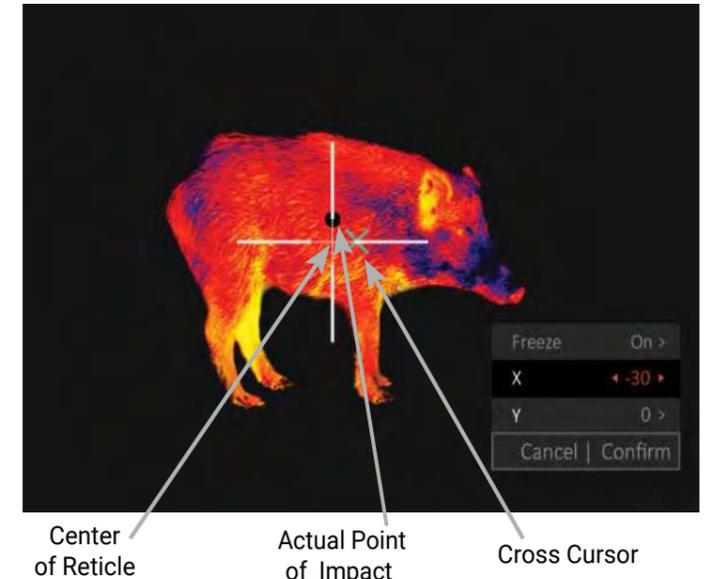


**One Shot Zeroing:** Prior to using the one shot zero function, you must set the Zeroing Distance by accessing the short menu.



Go to Zeroing Settings interface via the main menu, select the same distance preset by short cut menu to start zeroing in process. Aim the reticle center to the center of the target, and hold the rifle as stable as possible and fire a bullet. Rotate the menu knob to turn on

the freeze option in the pop-up window showing "X" and "Y" while making sure the light green X (cross cursor) still pointing at the center of target. After the image is frozen, short press M Button and then rotate the Menu knob to select and adjust the value of "X" (move left and right) or "Y" (move up and down) to move the center of the reticle until it overlaps with the actual point of impact. Use menu knob to select the "Confirm" option in the Pops up window, and short press the M button to confirm it. Each rotation of the Menu knob moves the center of the reticle by 1px. The cross cursor represents the original aiming point before any adjustment was made.



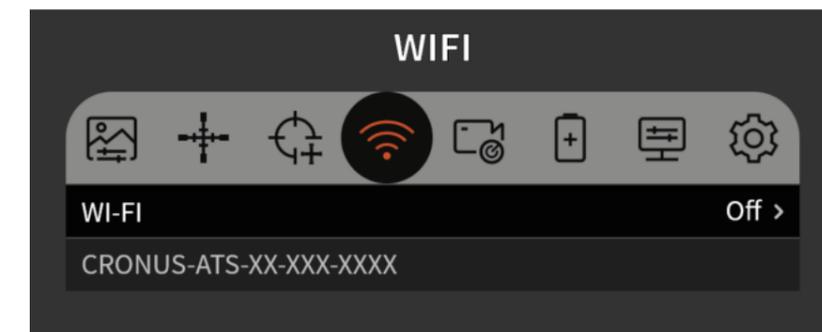
**24 WIFI**



**WiFi On/Off:** When the phone APP and the Scope are connected, real-time video can be transmitted to the phone.

WiFi Name: CRONUS -ATS-XX-XXX

**NOTE:** Search and download Athlon Thermal APP in the mobile phone APP store, open the APP, find the WiFi name 'Cronus ATS XX-XXX' in the settings of mobile phone WiFi, and enter the password '12345678', to start remote operation after successful connection.

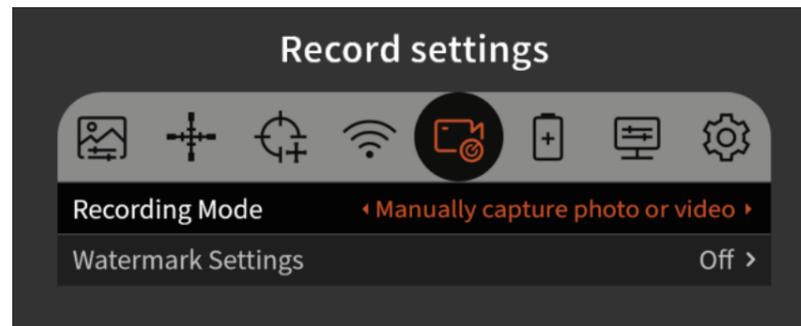


## 25 RECORD SETTINGS



**Record Mode:** After it is turned on, you can set the below three modes:

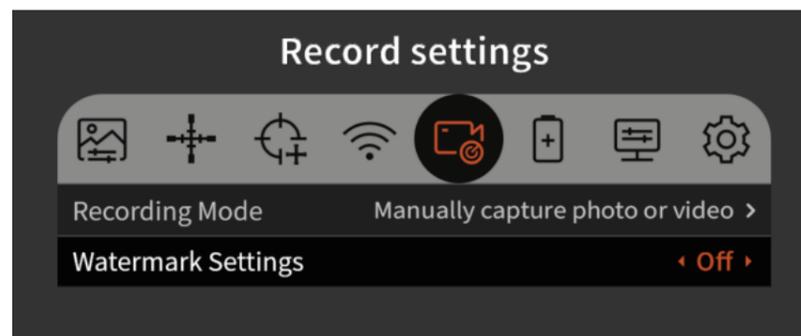
- **Manually record:** Short press shutter button to record and long press to stop
- **Automatically take pictures:** Automatically take 10 pictures continuously within 1s upon firing
- **Automatically record video:** Automatically record 3s video before and 7s after upon firing



Picture Information	
Format:	JPG format
File Location:	...../DCIM/ATHLON THERMAL

Video Information	
Format:	H264 encoded MP4 format
File Location:	...../DCIM/ATHLON THERMAL
Video resolution:	1024×768
Video frame:	50Hz

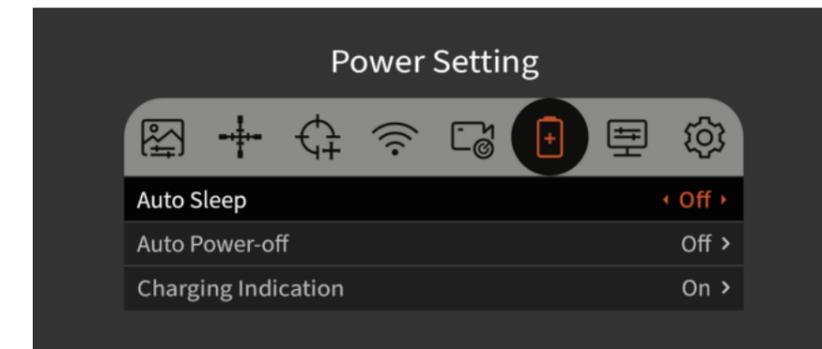
**Watermark Settings:** When turned on, it can be selected from Time Only/Date Only/Time Date/Off.



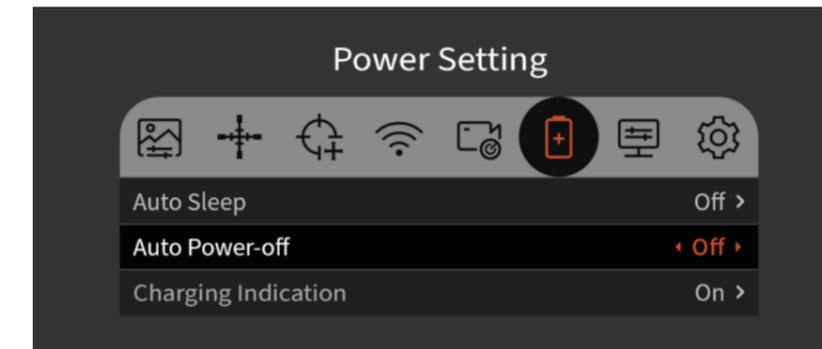
## 26 POWER SETTING



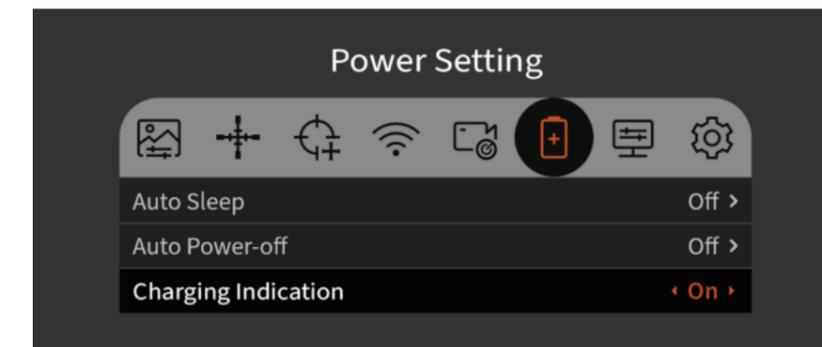
**Auto Sleep:** The Auto Sleep time can be set to 5/10/15 min. If there is no operation within the set time, the scope will enter sleep mode.



**Auto Power-Off:** The automatic Power-off time can be set to 15/30/60 minutes. If there is no operation within the set time, the power-off will be activated, and the scope will be powered off.



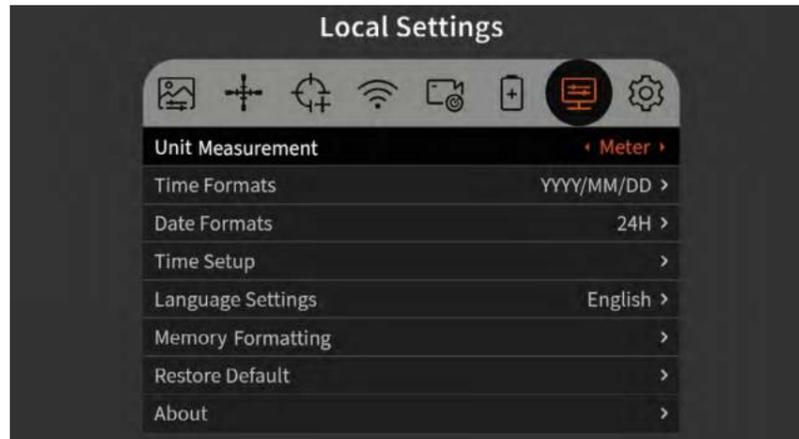
**Charging Indication:** Switch that turns On/Off the charging port indication light.



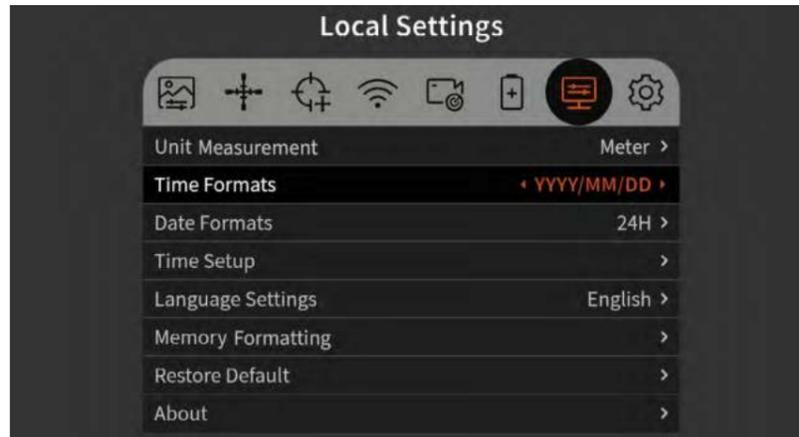
## 27 LOCAL SETTINGS



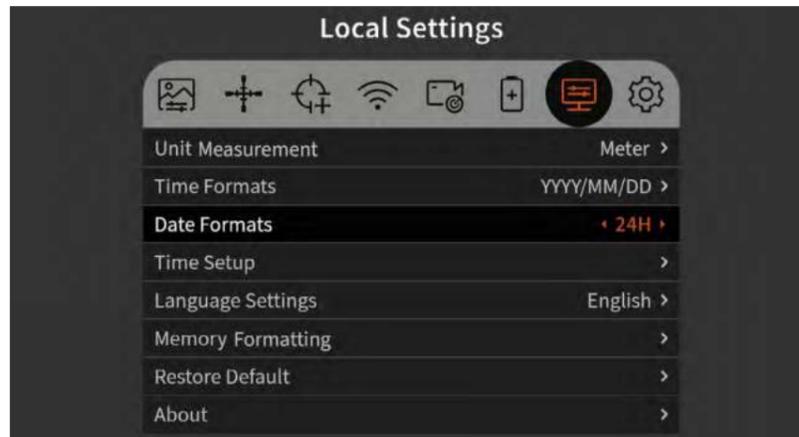
**Unit Measurement:**  
Meter or Yard



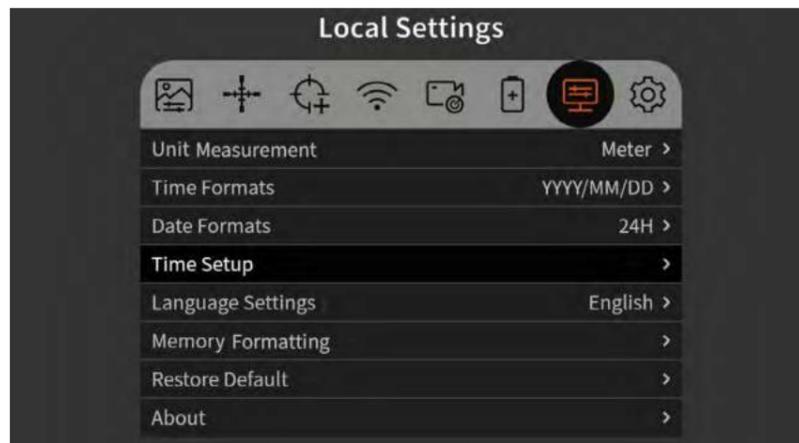
**Time Formats:**  
Optional from:  
YYYY-MM-DD  
MM-DD-YYYY  
DD-MM-YYYY



**Date Formats:**  
selectable between  
12H / 24H



**Time Setup:** Enter the Time Setup, rotate the Menu knob to move among different options, and press the "M" button to enter the next level adjustment, and then rotate the Menu knob to move between the specific time values

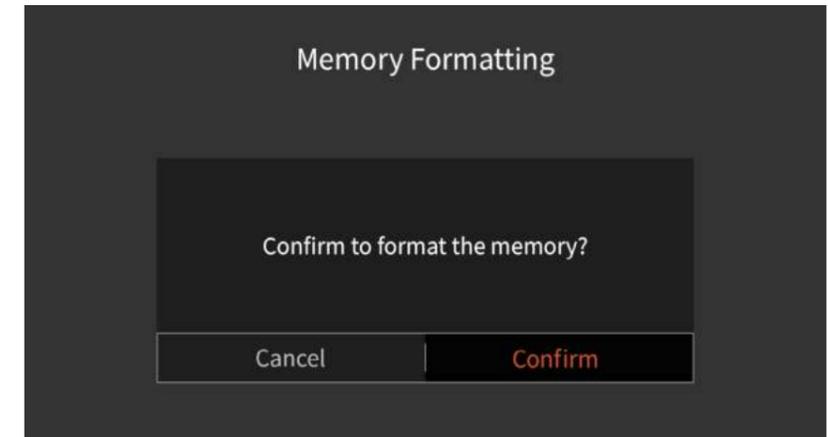


**Language Settings:** Available in English/French/German/Italian/Spanish



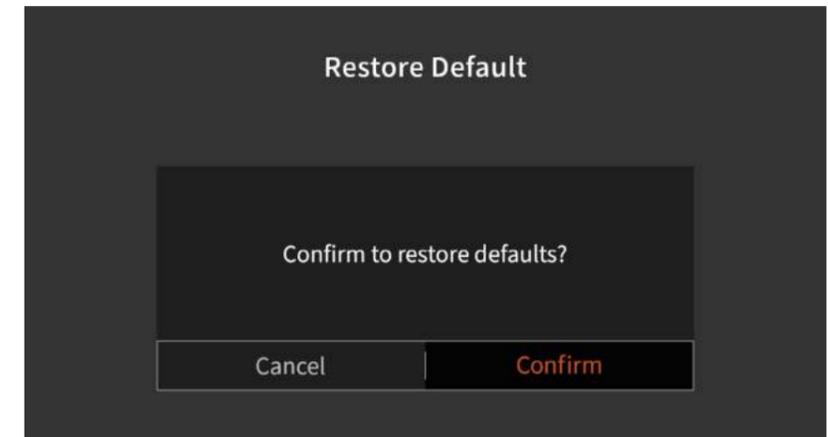
**Memory Formatting:**  
Select Memory Formatting. Select "Confirm" to confirm formatting, and select "Cancel" to cancel the operation

**SELECT WITH CAUTION!**

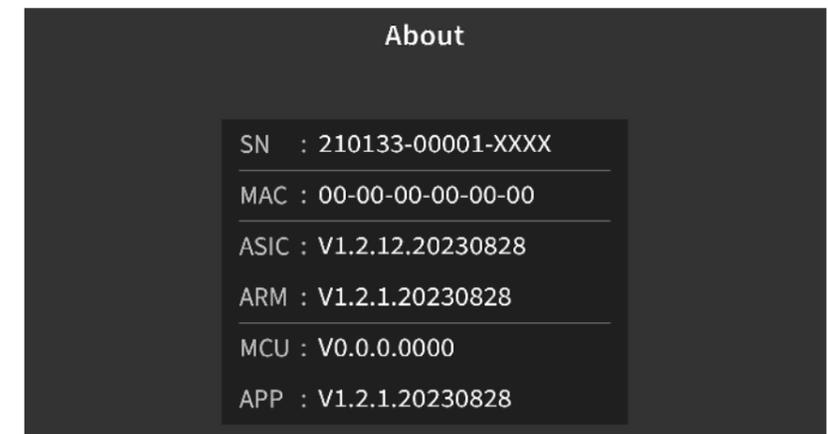


**Restore Default:** You can choose to restore the factory settings. Select "Confirm" to restore all parameters to factory settings; Select "Cancel" to cancel the operation

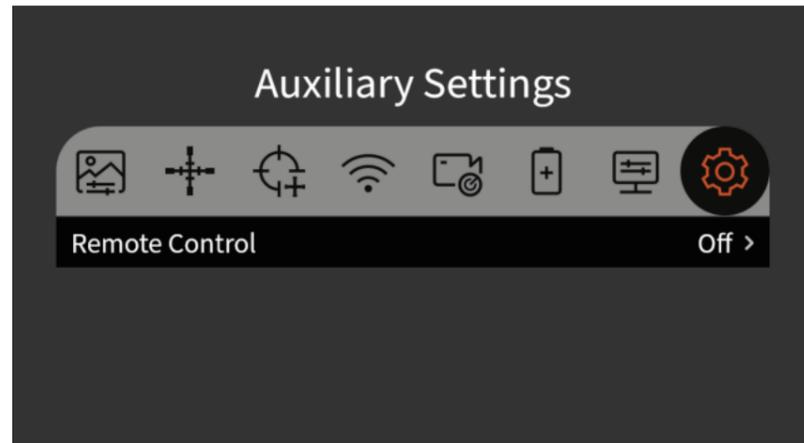
**SELECT WITH CAUTION!**



**About:** Check the current device in the APP version number and MAC address



28 AUXILIARY SETTINGS



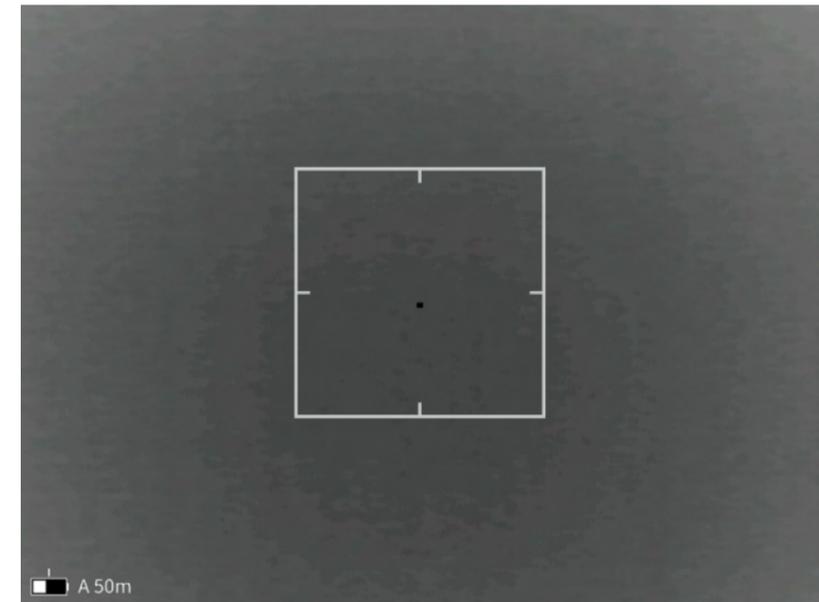
**Remote Control:** After being turned on, it will search for Bluetooth remote control connection. After successful connection, all functions of the button on the scope can be controlled by the Bluetooth remote control (except the function required by long press). The bluetooth remote has 1 hardware switch and 4 buttons. Among them, the hardware switch controls the on and off of the remote control itself. The 4 buttons correspond to the 4 buttons on the scope as shown in the figure below

**NOTE:** It needs to be used with optional accessories.

Remote controller button	Operation	Function	Current State
	Press	Compensation	Menu not activated
	Press and Release	Display off	
	Press	Take Photo	Menu not activated
		Move Menu	Menu activated
	Long press	Zoom out	
	Press	Shortcut menu	Menu not activated
		To next menu Confirm option	Menu activated
	Long press	Main menu	Menu not activated
		Return/Exit Top Menu Cancel setting	Menu activated
	Press	Start recording/Finish recording	Menu not activated
		Function/Option toggle down or right	Menu activated
	Long press	Zoom in	

7.3 PHOTOS & VIDEOS

**Photos:** When the camera is turned on and the menu is not activated, press the "Shutter Button," take a picture and freeze 300ms and then restore the real-time image.

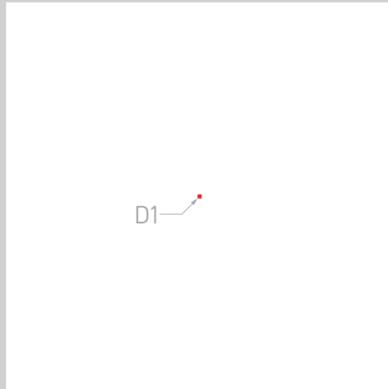


**Videos:** When the scope is turned on and the menu is not activated, long press the "Shutter Button" to start recording, and long press again to end recording. During the recording process, short press the "Photo Button" to take a photo and freeze it for 300ms, and then restore the real-time image.



MOA RETICLES

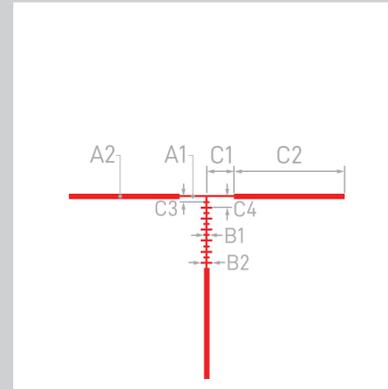
MIL RETICLES



RETICLE - MOA #01  
- subtensions in moa -

	50-640	50-400	35-400
--	--------	--------	--------

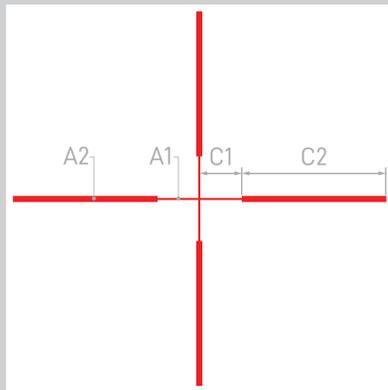
D1	2.08	1.84	2.6
----	------	------	-----



RETICLE - MIL #01  
- subtensions in mil -

	50-640	50-400	35-400
--	--------	--------	--------

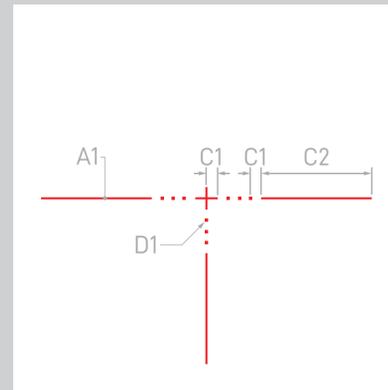
A1	0.3	0.26	0.38
A2	0.9	0.78	1.14
B1	1	1	1
B2	2	2	2
C1	5	5	5
C2	20	20	20
C3	1	1	1
C4	2	2	2



RETICLE - MOA #02  
- subtensions in moa -

	50-640	50-400	35-400
--	--------	--------	--------

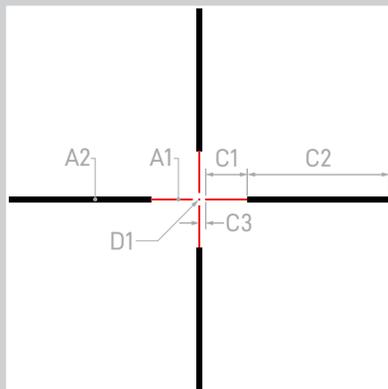
A1	1.04	0.92	1.3
A2	3.12	2.76	3.9
C1	20	20	20
C2	68	68	68



RETICLE - MIL #02  
- subtensions in mil -

	50-640	50-400	35-400
--	--------	--------	--------

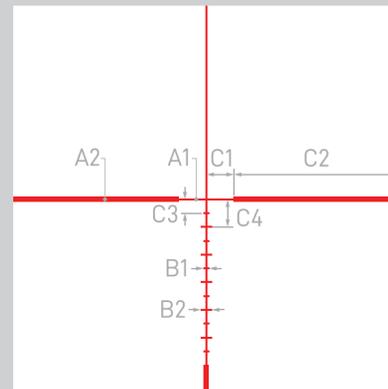
A1	0.3	0.26	0.38
C1	2	2	2
C2	20	20	20
D1	0.6	0.52	0.76



RETICLE - MOA #03  
- subtensions in moa -

	50-640	50-400	35-400
--	--------	--------	--------

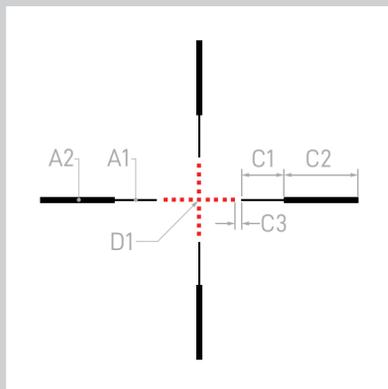
A1	1.04	0.92	1.3
A2	3.12	2.76	3.9
C1	20	20	20
C2	68	68	68
C3	3	3	3
D1	1.04	0.92	1.3



RETICLE - MIL #03  
- subtensions in mil -

	50-640	50-400	35-400
--	--------	--------	--------

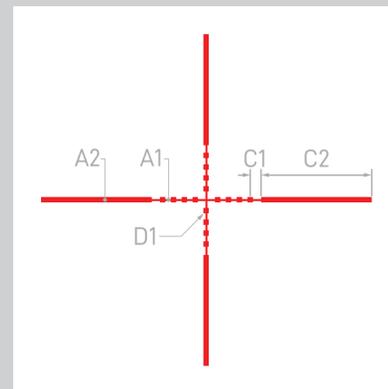
A1	0.3	0.26	0.38
A2	0.9	0.78	1.14
B1	1	1	1
B2	2	2	2
C1	5	5	5
C2	20	20	20
C3	2.5	2.5	2.5
C4	5	5	5



RETICLE - MOA #04  
- subtensions in moa -

	50-640	50-400	35-400
--	--------	--------	--------

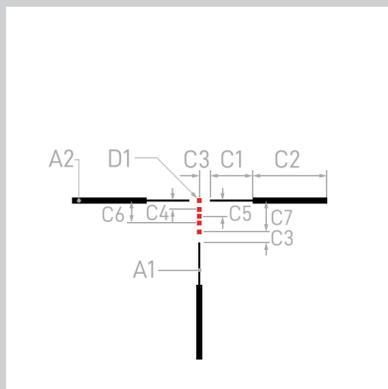
A1	1.04	0.92	1.3
A2	3.12	2.76	3.9
C1	20	20	20
C2	35	35	35
C3	4	4	4
D1	2.08	1.84	2.6



RETICLE - MIL #04  
- subtensions in mil -

	50-640	50-400	35-400
--	--------	--------	--------

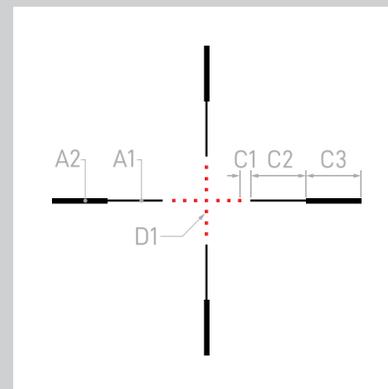
A1	0.3	0.26	0.38
A2	0.9	0.78	1.14
C1	2	2	2
C2	20	20	20
D1	0.9	0.78	1.14



RETICLE - MOA #05  
- subtensions in moa -

	50-640	50-400	35-400
--	--------	--------	--------

A1	1.04	0.92	1.3
A2	3.12	2.76	3.9
C1	20	20	20
C2	35	35	35
C3	5	5	5
C4	4	4	4
C5	7.3	7.3	7.3
C6	10.4	10.4	10.4
C7	14.6	14.6	14.6
D1	2.08	1.84	2.6



RETICLE - MIL #05  
- subtensions in mil -

	50-640	50-400	35-400
--	--------	--------	--------

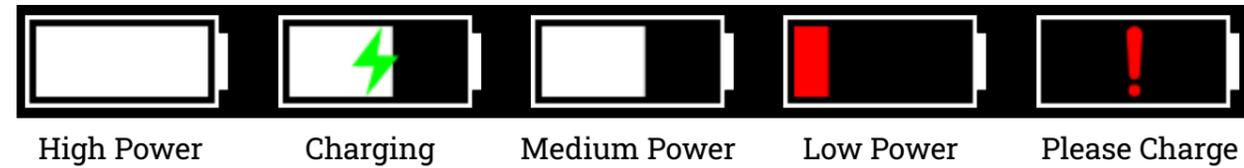
A1	0.3	0.26	0.38
A2	0.9	0.78	1.14
C1	2	2	2
C2	10	10	10
C3	10	10	10
D1	0.6	0.52	0.76

The MOA #05 reticle is a bullet drop compensation reticle specifically designed for 5.56 mm NATO / .223 REM round. The holdovers for bullet drop are extended to 200, 300, 400, 500, and 600 yards.

## CHAPTER 9 - OTHER INSTRUCTIONS

### 9.1 POWER DISPLAY

**Power Display:** When the thermal scope is turned on and the battery level changes, the battery indicator is displayed in the lower left corner of the screen, and the highlighted part of the battery indicator shows the remaining battery capacity.



**NOTE:** When the internal battery is low, please charge it as soon as possible. The scope can not be turned on when the internal battery is out of power, and can only be turned on with external power supply through the USB-C port.

### 9.2 SOFTWARE CONNECTION

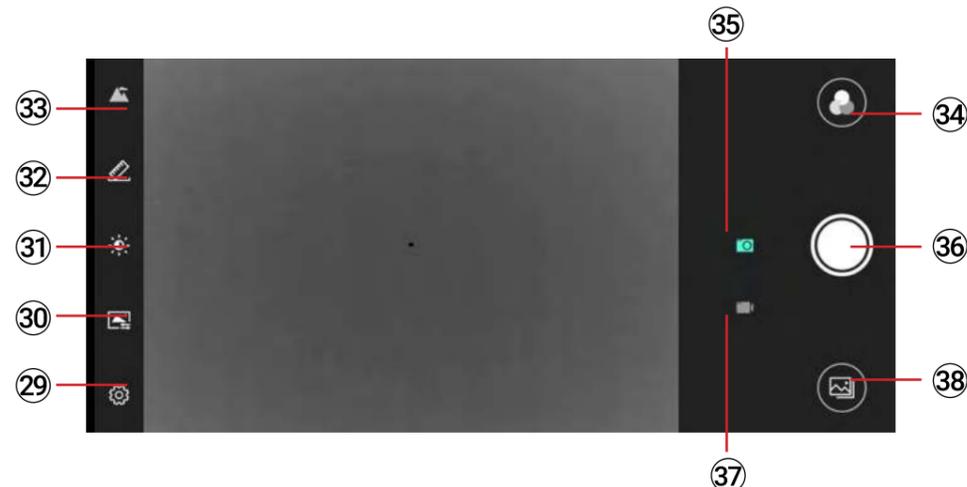
#### WiFi Connection:

- 1) Download the 'Athlon Thermal ' APP on your mobile phone;
- 2) Turn on product's WiFi via main menu
- 3) Enter the mobile phone WiFi setting, select the WiFi name of "CRONUS ATS XX-xxxx", enter the password '12345678' to connect;
- 4) Return to "Athlon Thermal" APP on your mobile phone

**NOTE:** In order to ensure reliable Wi-Fi signal connection and stable data transmission, please keep the scope and the phone within 15 yard, and there are no obstacles (such as partition walls, etc.).

#### App Function Description:

Control the Scope on the APP: After the APP is successfully connected to the device's WiFi, the Scope can be remotely controlled.

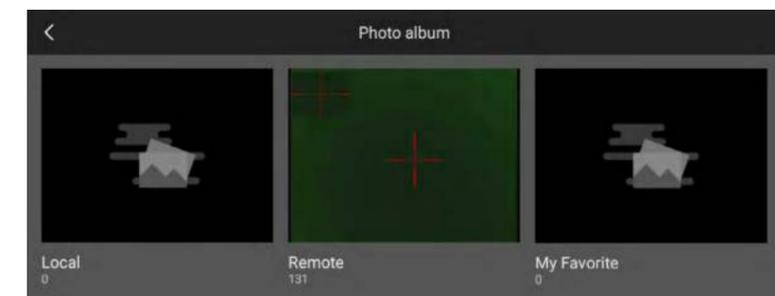


#### Function Icons:

- ②9 Reticule Settings, Common Settings
- ③0 Hot track, PIP, Image Enhancement
- ③1 Brightness Adjustment, Contrast Adjustment
- ③2 Stadiametric Rangefinder
- ③3 Natural/Enhanced/Highlight mode

#### Other Icons:

- ③4 White Hot/Black Hot/Red Hot/Iron Red/Blue Hot/Green Hot
- ③5 Shooting Status Display
- ③6 Shooting/Recording Control Key
- ③7 Recording Status Display
- ③8 APP Gallery entry



#### Access files on the APP

Control the scope on the APP: After the APP is successfully connected to the device's WiFi, the scope can be remotely controlled.

- **Local album:** after the APP is connected to the scope's WIFI, the location of the file will be stored on the APP after pictures/videos are taken, and the files will be automatically saved to the local photo album of the mobile phone; the pictures/videos can be collected, shared and deleted.
- **Remote Scope:** after the APP is connected to device's WIFI, the location of the file will be stored on the APP after pictures/videos are taken; the photos/videos can be downloaded, deleted and so on. The files will be automatically saved to the local photo album of the mobile phone.
- **My Favorites:** The location where the pictures/videos are stored after they are added to my favorites.

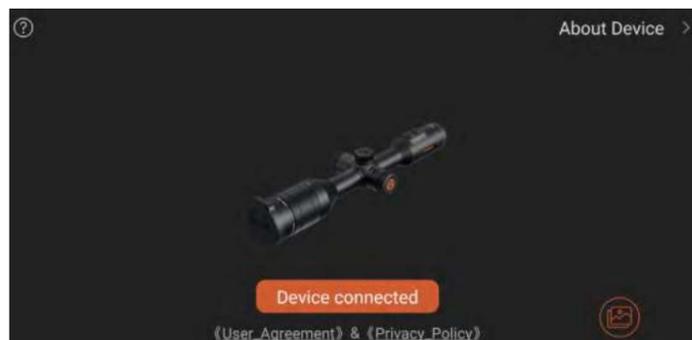
## CHAPTER 10 - FIRMWARE UPDATE

It is recommended for end users to get the latest version of firmware for improved performance and better image quality. **Please choose one of the following methods to complete the update:**

### 10.1 UPDATE VIA APP

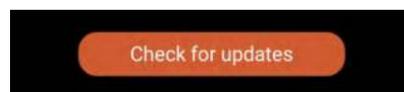
1) Power on the thermal optic and turn on the scopes WiFi through main menu.

2) Connect the thermal optic to your mobile device using this WiFi connection.

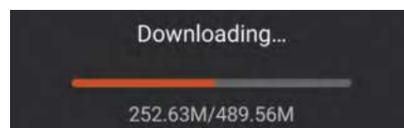


3) Open the Athlon Thermal mobile APP and click "About Device" in the upper right corner.

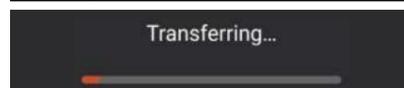
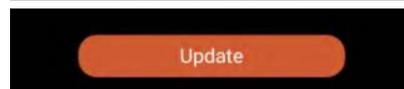
4) Make sure the mobile device has cellular data connection and then tap the "Check for updates" button.



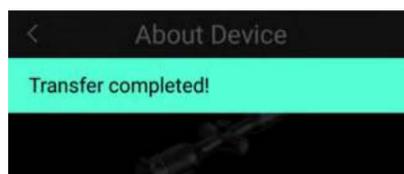
5) If there is an update available, it will appear on the screen. Tap the "Download" button and wait for 100% completion.



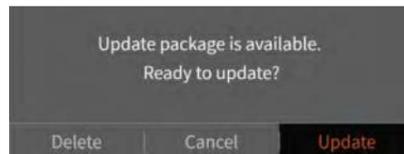
6) After the download is completed, tap the "Update" button to start the transferring process.



7) Once the firmware transfer is completed, the APP will show "Transfer completed!" on the top of the screen.



The screen of the thermal scope will show the options "Delete" "Cancel" and "Update." Rotate the menu knob and press the M button to select "Update."



Once the progress bar shows 100% completion, power off and on the thermal scope to begin enjoying the new firmware.



### 10.2 UPDATE VIA COMPUTER

1) Download the firmware package to your computer.

- To download the firmware package, visit the following URL: <https://athlonoptics.com/thermal-firmware-update/>

Thermal Model	What's the update	Firmware Package	ASIC
CRONUS ATS 35-400	Color sensitivity	V.X.X.X	V1.X.X.XXXXXXXXXX
CRONUS ATS 50-400	Color sensitivity	V.X.X.X	V1.X.X.XXXXXXXXXX
CRONUS ATS 50-640	Color sensitivity	V.X.X.X	V1.X.X.XXXXXXXXXX

**NOTE:** if you accidentally download the update package twice, please use the first download file named **ota-asic.img** not ota-asic(1).img. The exact file name must be used.

2) Turn on thermal device to "Com Mode."

- On the thermal device, long press the power button and M button at the same time when the device powers on, then release the power button while continuing to press the M button.
- Check the device LED screen to ensure it is in "Com Mode."

3) Connect the thermal device to your computer.

- Use type C cable to connect the thermal device to your computer.

4) Copy the downloaded firmware package to your computer.

- On your computer, copy the downloaded firmware package (ota-asic.img) to the root directory of the Thermal USB drive.
- Turn off the thermal device, then turn it back on. The firmware will update automatically.

5) Check if firmware updated successfully.

- Long press the M button until the Menu appears
- Select the "Local Settings" by turning M button. Go to the "About" screen and confirm the ASIC number matches the number listed with the update package on our website. If it matches, then the firmware has updated successfully.

8) Below warning messages will be displayed if the thermal device has insufficient power, internal memory, or failed receiving and updating the firmware.

Error occurred in receiving, verifying, or updating firmware, please try again.	Insufficient memory, please clean up internal memory.	Can not read internal memory, please try to format internal memory.	Insufficient power, please charge battery.

**NOTE:** If the updating failed and the thermal unit cannot be operated normally, please hold the M button and the power button simultaneously for 15 seconds to perform a hard power off and then power on the unit normally to restart the updating process.

## CHAPTER 11 - COMMON TROUBLESHOOTING GUIDE

- The device failed to be powered on.**  
**Solution:** Replace the battery or connect charger.
- The device has trouble taking pictures/videos.**  
**Solution:** The internal storage space of the device is full and/or the memory card needs to be formatted.
- The time displayed on the device does not match the actual time.**  
**Solution:** Reset the time and date of the device in the menu.
- The screen goes off during the use.**  
**Solution:** Short press any button to wake up from sleep and light up the screen.
- Image displayed on the device is blurry during operation.**  
**Solution:** Turn the lens to focus manually until the image is clear.
- The device is in deadlock stage and cannot be powered off normally.**  
**Solution:** Long press the M button and the power button simultaneously for 15 seconds to have a hard power off and then power the unit on normally.

# PRODUCT WARRANTY CARD

## Warranty Registration Required

This product carries a 3-year warranty from the date of purchase. For your product to qualify for this warranty, you must provide proof of purchase, the model and serial number of the device. Once activated, the device is warranted 3 years from the date of purchase.

- This warranty does not cover damages caused by deliberate damage, misuse, theft or maintenance provided by someone other than the Athlon Authorized Service Department.
- Please note that any altering of the products, such as Duracoat, hydro dipping or spray painting, will void the warranty on all thermal devices.

Scan the QR code to complete the online form to register your device.



## Alternative Means of Registration

We strongly recommend that you register your product online using the form available by scanning the QR code.

If you cannot register your device online or prefer to mail in a warranty card, please complete the following form and provide the original proof of purchase.

**Original proof of purchase required. Must show date of purchase.**

_____		_____	
FIRST NAME		LAST NAME	
_____			
STREET ADDRESS			
_____			
_____	_____	_____	_____
CITY	STATE	ZIP CODE	
_____			
EMAIL ADDRESS			
_____			
_____	_____		
DATE OF PURCHASE	PRODUCT SERIAL NUMBER		
			<p>Serial number is located on the bottom sticker of your products eyepiece.</p>

Mail to Athlon Optics ATTN: Warranty Registration 801 N Meadowbrook Dr, Olathe KS 66062

For questions or assistance email [contact@athlonoptics.com](mailto:contact@athlonoptics.com) or call 1-855-913-5678.

**SHARP, TIGHT  
AND PRICED  
JUST RIGHT!**

Toll free: 1-855-913-5678

[contact@athlonoptics.com](mailto:contact@athlonoptics.com)

801 N MEADOWBROOK DR,  
OLATHE, KS 66062

**ATHLONOPTICS.COM**