
SAIM NV Series User Manual

V1.0

InfiRay Technologies Co., Ltd.

Product Performance Indicator

Model	SCD35
Microbolometer	
Type	HD CMOS
Resolution, pixels	1920×1080
Pixel, μm	4
Optical Specifications	
Objective lens, mm	35 / F1.4
Field of view, °	8.4 × 6.3
Optical magnification, ×	3 ~ 12
Digital zoom, ×	1 / 2 / 3 / 4
Exit pupil distance, mm	35
Diopter, D	- 7 ~ +3
Display	
Type	FLCOS
Resolution, pixels	1280×960
Dimension, inch	0.39
Battery	
Battery type	CR123 (3.7V) * 2 / 16650 * 2
Max. battery life (t=22°C)*, h	3.5 (CR123) / 7 (16650)
External power supply, V	5 (Type C)
Physical Specifications	
Detection range, m	200
IP rating	IP66
Built-in memory, GB	16
Photo / Video resolution, pixels	1280×960
Operating temperature, °C	-20 ~ +50
Max. recoil power on rifled weapon,	1000 g
Weight (without batteries), g	430
Dimension, mm	195×61×61
IR illuminator	
Wavelength, nm	850 / 940

Battery type	18650
Max power, W	1.5

*Actual operation time depends on the density of Wi-Fi use and video recording functions, etc.;

*Improvements may be made to the design and software of this product to enhance its user experience without prior notice;

*The current version of the user manual can be viewed and downloaded from the official website <https://www.infrayoutdoor.com/>.

I. Package Contents

- SAIM NV SCD35 Day & Night Scope
- Picatinny Mount
- External IR Illuminator (850nm or 940nm)
- External IR Illuminator Mount
- IEB-2 Extra Battery (for 16650 battery)
- Type-C Cable
- Lens Cloth
- Two Wrenches (for mounts)
- Two Screws (for picatinny mount)
- Quick Start Guide

II. Description:

The SAIM NV series digital night vision device is a day and night vision rifle scope for outdoor hunting with a built-in starlight low illuminance detector. It can restore the real image color and details. It can be used with an IR illuminator for clear imaging at night. It is of light weight and small size, and adopts standard Picatinny rail interface. It adopts two CR123 or two 16650 batteries for power supply, and users can purchase appropriate batteries for replacement. It can be widely used for hunting, observation and positioning in low visibility conditions.

III. Distinguishing Features

- Starlight low illuminance sensor;
- Clear image at night;
- 1-4 times smoothly zoom in;
- Replaceable battery, with worry-free battery life;
- Clear imaging within 200m;
- Built-in 16G memory, supporting photographing and video recording;
- Built-in Wifi module, supporting Infray outdoor App connection;
- PIP (picture-in-picture) function;
- Convenient operation interface;

IV. Components and Controls

1. Eyeshade
2. Eyepiece diopter adjustment ring
3. Type C interface
4. C (Camera) button
5. M (Menu) button
6. P (Power) button
7. Battery compartment
8. Lens focus ring
9. Objective lens
10. Lens cover



V. Button Operations

Button	Current status	Short press	Long Press
Power button	Powered off	----	Power on the device
	Home screen	Digital zoom	Enter the power-off interface
	Standby mode	Wake up the device	----
	Menu interface	Scroll up the menu option	----
	Range notification settings interface	Increase the value slowly	Increase the value fast
	Zeroing interface	Move the reticle up / left slowly	Move the reticle up / left fast
Menu button (M button)	Home screen	Enter the shortcut menu	Enter the main menu
	Shortcut menu interface	Change parameter	Save and exit to the home screen
	Main menu interface	Confirm the selection / Enter the submenu	
	Power-off interface	Confirm the selection	----
	Range notification settings interface	Change options	----
	Zeroing interface	Switch the movement direction between X and Y	Save and exit to the Main menu screen
Camera button (C button)	Home screen	Take a photo	Start a video recording
	Shortcut menu, main menu, power-off interface	Scroll down the menu option	----
	Video recording	Take a photo	Stop and save the video recording
	Range notification settings interface	Decrease the value slowly	Decrease the value fast
	Zeroing interface	Move the reticle down / right slowly	Move the reticle down / right fast
C button + M button	Home screen	Enter the range notification interface	----

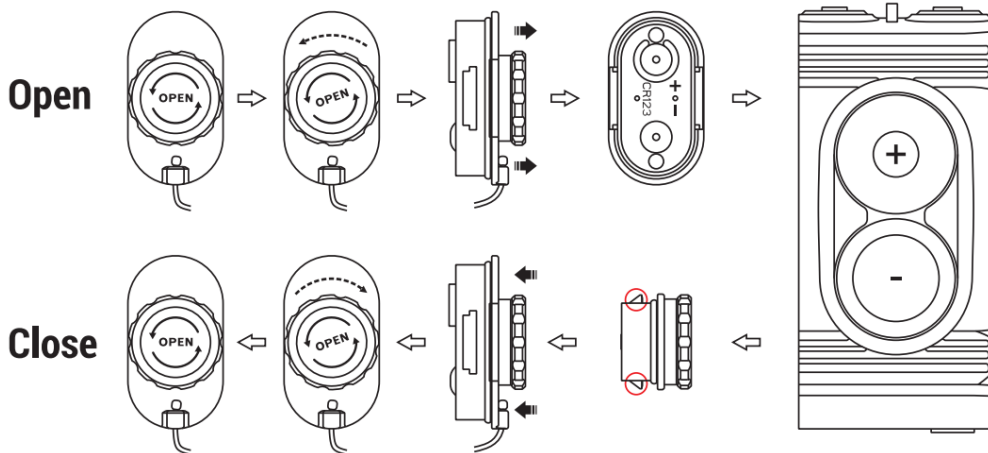
	Range notification interface	Exit to the home screen	Enter the range notification settings interface
	Range notification settings interface	---	Save and exit to the range notification interface

VI. Battery Power Supply

The SAIM NV series is powered by two CR123 batteries or two 16650 batteries, with the normal working time of 3.5 hours and 7 hours respectively. The data cable can only be used to power the device, but not to charge the battery.

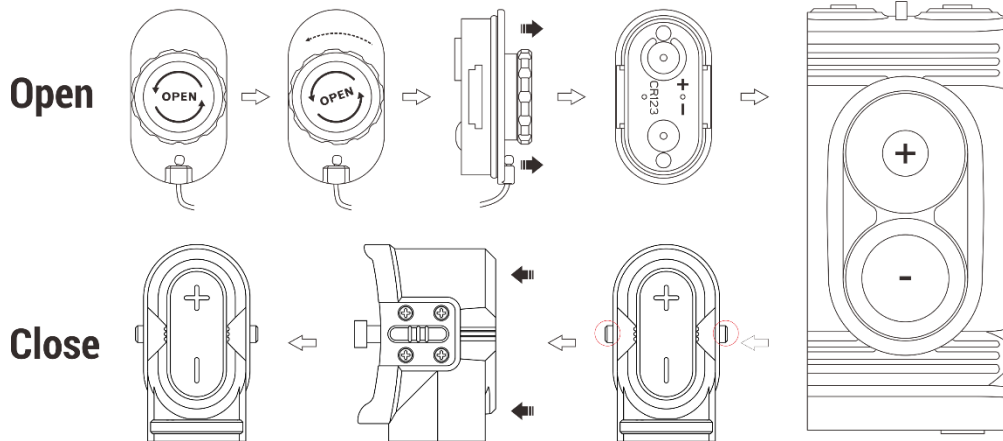
Battery Installation

The installation of CR123 batteries

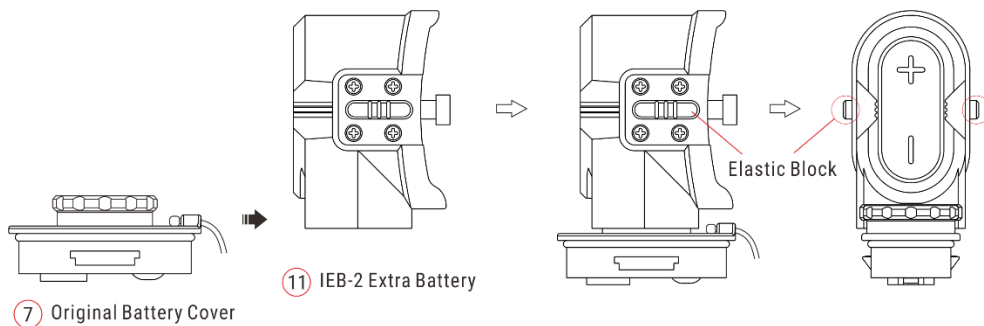


- Open the battery compartment cover (7) anticlockwise according to the prompt identification on the cover.
- Install the two CR123 batteries correctly according to the marking on the battery cover and inside it.
- When done, replace the battery cover (7) - the latches from both sides of the cover will pull out (see the drawing above), then press it until its clicking position - make sure the cover is closed on both sides correctly.
- Battery level is displayed on the status bar.
- When the battery icon turns red, please replace the new battery in time.
- It is necessary to power off before replacing the batteries.

The installation of 16650 batteries



- When using the 16650 batteries, the IEB-2 Extra Battery cover (11) is needed to replace the original battery cover (7).
- Remove the battery compartment cover (7) and install the two 16650 batteries correctly according to the marking on the battery cover and inside it.
- Place the IEB-2 Extra Battery cover on the battery compartment and press it until its clicking position.
- After installation, install the original battery cover (7) on the IEB-2 Extra Battery cover (11) as shown below.



- Press down the elastic blocks on both sides at the same time to remove the IEB-2 Extra Battery cover (11).

VII. External Power Supply

The SAIM NV series supports external power supplies, such as the portable power source for a mobile phone (5V).

- Connect an external power supply to the USB port of SAIM NV;

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- Then, the device automatically switches to the external power supply but not to charge the battery;
 - When the external power is turned off, the device will switch to the battery for the power supply.

VIII. Installation and Usage

WARNING! The lens of the digital night vision device must not be pointed at any sources of intense radiation energy, such as laser-emitting devices or the sun. This may damage the electronic components in the device. Damage caused by failure to comply with the operating guidelines is not covered under warranty.

Fixed mounting

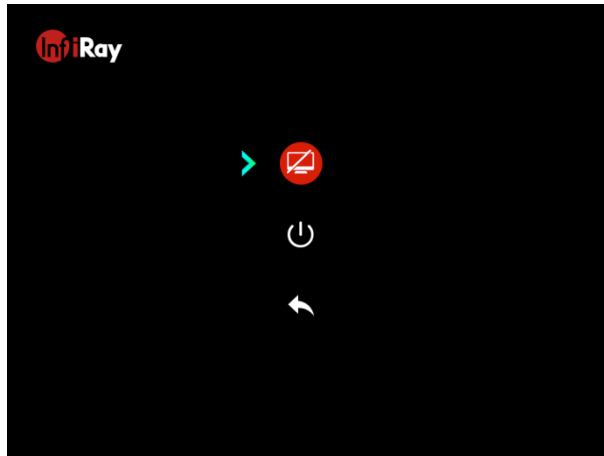
To ensure shooting accuracy, please fix the SAIM NV series device at a proper position on the weapon.

- To fix the SAIM NV series device, a Picatinny rail bracket is required, such as the Picatinny rail bracket provided in the package. Proper tools can be used to install the Tube device according to the supplier's installation suggestions and steps.
- During installation, the installation position of the SAIM NV series device should be adjusted according to the distance between eye and eyepiece (eye relief) as specified in the specifications and the sense of use and comfort. If you fail to follow this suggestion, the eyepiece may hurt the shooter during the shooting.
- It is recommended to install the scope as low as possible, but keep it away from the barrel or other devices;
- It is recommended to use a torque wrench to tighten the screws of the installation clamps, so as to avoid damaging the scope body due to being over-tightened, and the recommended torque shall not exceed 2.5Nm;
- When the scope is used for hunting, please carry out the zeroing operation first according to the instructions as specified in "Chapter 9 "Zeroing" in this manual;
- When using the scope at night or in a dark environment, it is recommended to use an eye cup

to avoid being found.

Startup and Configuration

- Opening the lens cap;
- Press and hold the Power button for 2s to power on the device. Then, the home screen appears after 5s.
- Adjust the resolution of the icon on the display by rotating the eyepiece focusing ring of the ocular lens;
- Adjust the focus length by rotating the focusing ring of the objective lens;
- Press and hold 3 buttons (Power + M + C) at the same time for 15s to turn on the reticle function. Then, the reticle appears on the screen. The functions related to the reticle in the shortcut menu and the advanced menu also appear at the same time.
- Setting the image mode: On the home screen, press the M button (6) to open the shortcut menu, press the Power button or C button to select the image mode option, and then press the M button to set the image palette mode, which is **day - twilight - night** in sequence, and the icon on the top status bar is updated in real time;
- Setting the display brightness: In the shortcut menu, press the Power button or C button to select the screen display brightness option, then press the M button to adjust the screen display brightness, which can be switched from level 1 to 5;
- After use, on the home screen, press and hold the power button for 3s, and then the standby/shutdown option appears; press the Power button or C button to select the shutdown option, and then press the M button to confirm shutdown, and finally, the display turns black and the device shuts down. **When the device is powering off and saving data, do not disconnect it from the power source. Otherwise, the data cannot be saved.**
- In the standby/shutdown option interface, select the standby option and then press the M button, and the device will enter the standby status.



IX. Zeroing

The SAIM NV series adopts the "freezing" zeroing method. It is recommended to carry out the zeroing operation within the range of operating temperature of the scope.


- Fix the scope on the weapon with a Picatinny rail clamp;
- Select a target at a certain distance, such as 100m, 200m, etc.;
- Adjust the scope according to the operating instructions as described in Chapter VIII

Startup and Configuration;

- Press and hold the M button to enter the advanced menu screen to select the Gun Type for Zeroing, and switch to the Gun Type you want to zero (referring to " **Gun Type for Zeroing** in the advanced menu");
- In the advanced menu screen, select the zeroing function to enter the zeroing screen (referring to the "**Zeroing Screen**" in the advanced menu), and the coordinate position of the reticle (X axis, Y axis) is displayed in the upper left corner of the screen;



- Shoot at the target;

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- Observe the position of the actual point of impact, and assume that the red mark × in the figure on the right is the position of the point of impact (This mark is only for illustration. It should actually be a bullet hole);
 - If the point of impact and the aiming point (the center point of the reticle) do not match with each other, keep the aiming position still, and meanwhile, press and hold the M button and C button to freeze the picture, and then a snow-like freezing icon  appears on the left of the screen;
 - Press or hold the Power button or C button to move the reticle, press the Power button to move the cursor to left or down, and press the C button to move the cursor to right or up;
 - Press the M button to switch between the X axis and Y axis, and the position of the cursor > indicates the currently selected item, with the icon turning blue;
 - After moving the reticle, a little white dot appears on the display, indicating the position of the reticle before moving;
 - After moving the reticle position to the actual point of impact, press and hold the M button to save the current reticle position and return to the main screen of the advanced menu;
 - Repeat aiming and shooting, until the position of the point of impact is consistent with that of the aiming point.

X. Digital Zoom

The SAIM NV series scope supports the zoom function of 3-6-9-12, by which you can zoom in on an image by 1 to 4 times smoothly.

- On the home screen, press the Power button to zoom in/out on the image;
- The digital magnification of an image is cycled according to 1-2-3-4-1;

XI. Photo Taking and Video Recording

The SAIM NV series is equipped with a built-in 16 GB memory card, which allows photographing and video recording an observed target. Image and video files will be named after time, so it is recommended to complete the system date and time settings in the advanced menu before using the photo taking and video recording function (referring to "**Advanced Menu-Time**").

Camera

- On the home screen, press the **C button** to take a photo. A photo icon appears in the upper left corner of the display after the picture is stuck for 0.5s;
- The images taken are saved in the built-in memory space.

Record

- On the home screen, press and hold the **C button** to start the video recording;
- A recording icon and a prompt box showing the recording time will appear in the upper

right corner of the display, with the time format as 00:00:00 (hours: minutes: seconds);

- During recording, you can also take a photo by pressing the **C button**;
- Stop the recording and save the video by pressing and holding the **C button**;
- The videos and images taken are saved in the built-in memory space.



Note:


- The menu can still be operated during video recording;
- All the images taken and the videos recorded are stored in the built-in memory card in the format of IMG_HHMMSS_XXX.jpg (image) and VID_HHMMSS_XXX.mp4 (video), with HHMMSS indicating hours/minutes/seconds and XXX indicating the serial number of the three-digit multimedia file;
- The serial number of the multimedia file cannot be reset;
- The maximum duration of a video recording file is 10 minutes. When the duration is more than 10 minutes, the video will be automatically recorded onto a new file;
- The number of files is limited by the capacity of the built-in memory space of the device. You should check the remaining capacity of the memory card regularly, and transfer

materials and images to other media to free up the space on the memory card.

- The interface icon information is not displayed on the captured video or image.

Memory Access

When the device is powered on and connected to a computer, it will be recognized by the computer as a flash memory card. Then, you can access the memory of the device and copy images and videos.

- Connect the device to a computer through the data cable;
- Start-up the device;
- Double-click "My Computer", double-click to open the device named "Infray"  , and then double-click to open the device name "Internal Storage"



to access the memory;

- Open the memory file, and there are different folders named after time in the format of xxxx (year) xx (month) xx (day) in it;
- In the folder are the images and videos that are taken and recorded that day;
- Select required files or folders to copy or delete.



XII. Status Bar



The status bar is located at the top of the image interface and displays the information related to the current operating status of the device. From left to right, there are:

1. Current image mode (☀️ : Day Mode; 🌄 : Twilight Mode; 🌙 : Night Mode;)
2. Current gun type for zeroing and zeroing distance (e.g., 🏹 G2)
3. Current optical magnification (e.g., 4×)
4. Display brightness (1-5)
5. Wi-Fi status (📶 : Wi-Fi is off; 📶 : Wi-Fi is on)
6. Clock (You can set up date and time in the settings menu, or download the InfiRay Outdoor APP to synchronize phone time to the device)

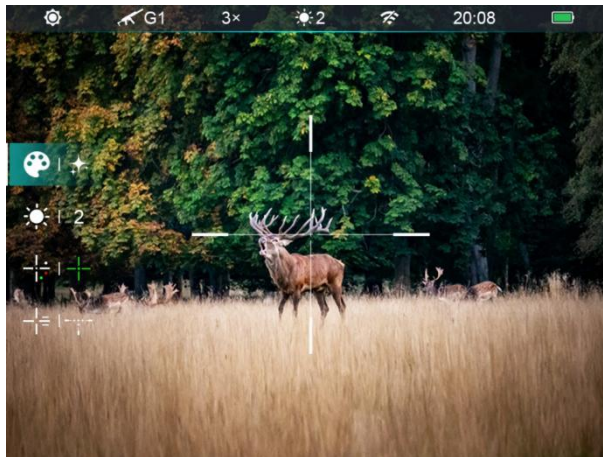
7. Power status of the battery

Note: When the inside of the icon is in green , it means that the power is higher than 20%, indicating that the battery power is sufficient; when it is in red , it means that the battery power is low; when the USB logo appears in the middle of the icon, it means that it is powered by an external power supply.

XIII. Shortcut Menu

You can quickly adjust the settings of some common functions through the shortcut menu, including image mode, screen brightness, reticle color, and reticle style. Press and hold the **M button** to save and exit to the home screen.

- On the home screen, press the **M button** to go to the shortcut menu screen;
- Press the **Power button** or **C button** to switch between the following function options, and the icon background of the selected option will be highlighted:
 - **Image mode:** Press the **Power button** or **C button** to select this option, and then press the **M button** to adjust the image mode (Day-Evening Twilight-Night);



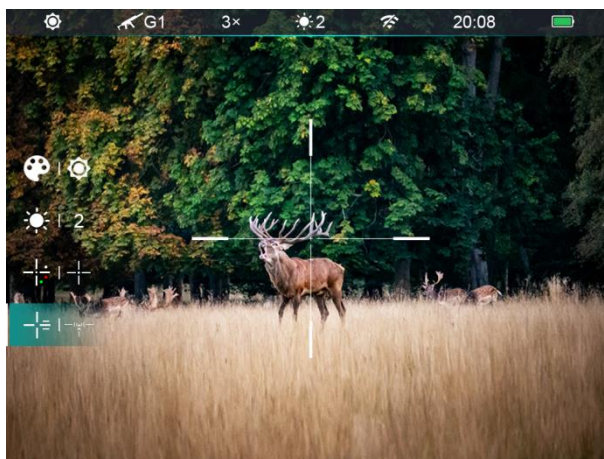
- **Screen brightness:** Press the **Power button** or **C button** to select this option, and then press the **M button** to adjust the screen brightness from level 1 to 5;



- **Reticle color:** Press the **Power button** or **C button** to select this option, and then press the **M button** to switch the reticle color (White-Black-Red-Green);



- **Reticle style:** Press the **Power button** or **C button** to select this option, and then press the **M button** to switch between 8 reticle styles;





- Press and hold the **Menu button** to save the changes and return to the home screen.





XIV. Advanced Menu:



- On the home screen, press and hold the **M button** for 3s to go to the main menu;

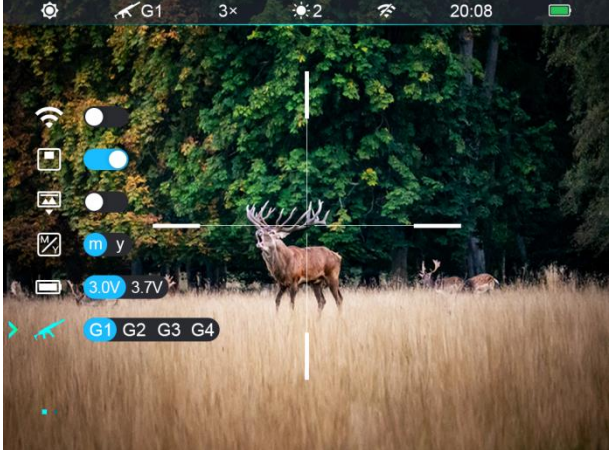

- Press the **Power button** or **C button** to switch the main menu function options, press the C button to move down, and press the Power button to move up;
- The function options in the main menu are cyclical: when the cursor > reaches the last option on the first page, press the C button and it will turn to the first menu option on the second page. When the cursor > is at the first option on the first page, press the Power button and it can skip directly to the last menu option on the second page;
- Press the **M button** to modify the parameters of the current option or go to the next level of the menu;
- Press and hold the M button to exit the advanced menu;
- The position of the cursor indicates the selected option, the icon of which will change from white to blue;
- During the continuous operation of the scope, when exiting from the advanced menu, the cursor > remains at the position before exiting. When you restart the scope and go to the advanced menu for the first time, the cursor stays at the first menu option.

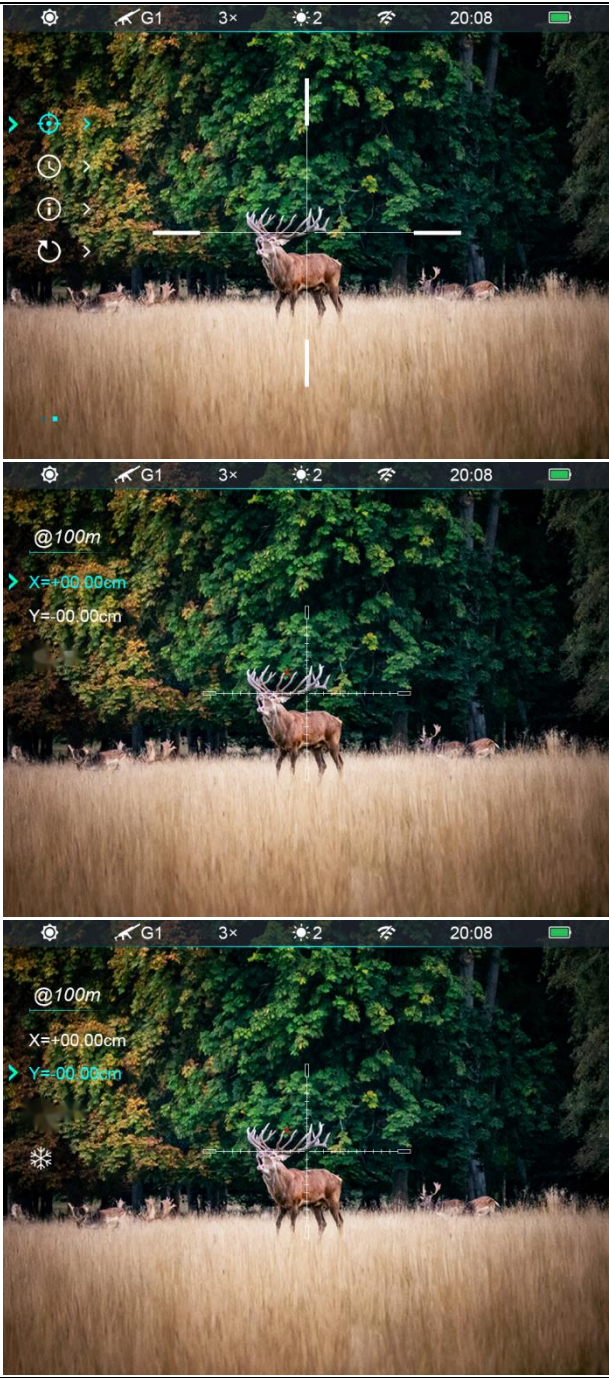

Composition and Description of Main Menu



<p>Wi-Fi</p> 	<p>Enabling/Disabling Wi-Fi</p> <ul style="list-style-type: none"> ● Press and hold the M button to go to the advanced menu screen; ● Press the Power button or C button to select the Wi-Fi option; ● Press the M button to enable or disable Wi-Fi; ● The icon in the status bar changes accordingly after this mode is turned on or off. 
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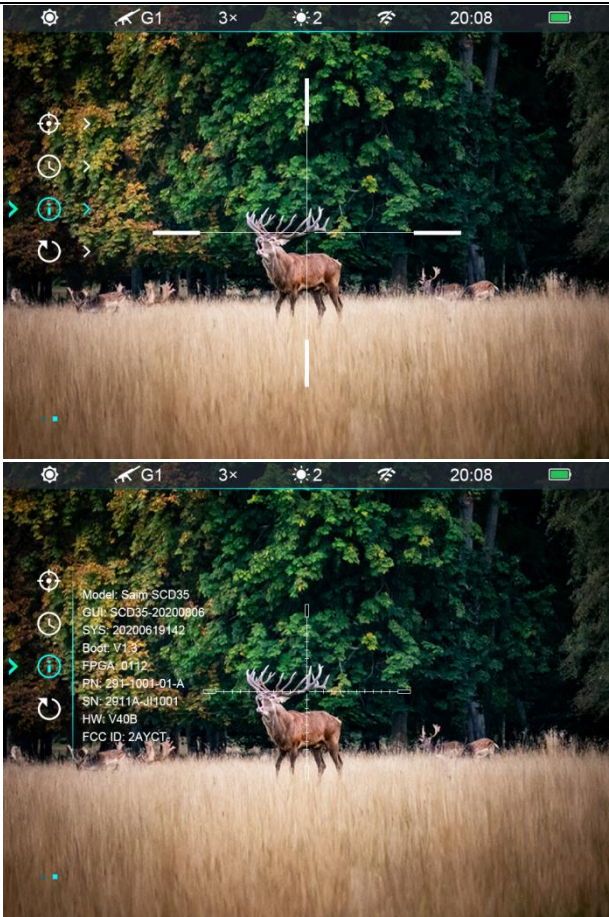

<p>Picture-in-Picture</p>	<p>Turn the Picture-in-Picture function on or off</p> <ul style="list-style-type: none"> ● Press and hold the M button to go to the advanced menu screen; ● Press the Power button or C button to select the "Picture-in-Picture" function option; ● Press the M button to turn on/off the Picture-in-Picture function;  <p>The screenshot shows the advanced menu screen with a background image of a deer in a field. The menu items are: Wi-Fi (off), Picture-in-Picture (on), Zoom (off), Units (m/y), and Battery (3.0V/3.7V). At the bottom, there are buttons for G1, G2, G3, and G4.</p>
<p>Status Auto Hiding</p> 	<p>Enabling/Disabling status auto hiding</p> <ul style="list-style-type: none"> ● Press and hold the M button to go to the advanced menu screen; ● Press the Power button or C button to select the "Status Auto Hiding" function option; ● Press the M button to select on or off;  <p>The screenshot is identical to the one above, showing the advanced menu screen with the Status Auto Hiding option highlighted.</p>
<p>Units of Measure</p> 	<p>Selecting the Units of Measure</p> <ul style="list-style-type: none"> ● Press and hold the M button to go to the advanced menu screen; <p>Press the Power button or C button to select the "Units of Measure" function option;</p> <ul style="list-style-type: none"> ● Press the M button to switch between meters or yards;

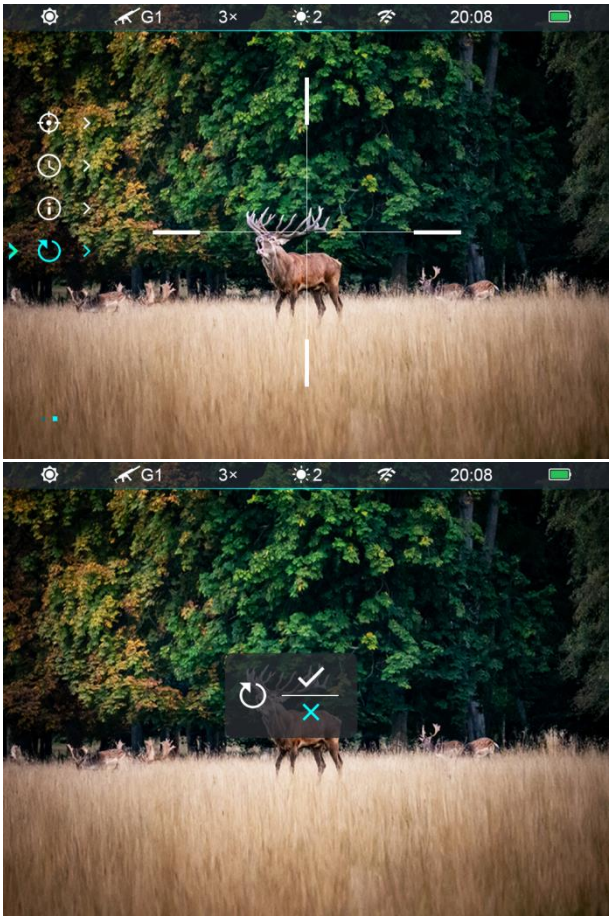
	
<p>Battery Type</p>	<ul style="list-style-type: none"> ● Press and hold the M button to go to the advanced menu screen; ● Press the Power button or C button to select the "Battery Type" function option; ● Press the M button to switch between 3.0V or 3.7V; 
<p>Gun Type</p>	<ul style="list-style-type: none"> ● Press and hold the M button to go to the advanced menu screen; ● Press the Power button or C button to select the "Gun Type" function option; ● Press the M button to switch to G1/G2/G3/G4;

	
<p>Zeroing</p> 	<ul style="list-style-type: none"> ● The zeroing distance is 100m by default. ● Press and hold the M button to go to the advanced menu screen; ● Press the Power button or C button to select the "Zeroing" option; ● Press the M button to enter the Zeroing screen; ● The X axis and Y axis coordinates of the reticle are displayed on the top left corner of the display; ● Aim the reticle center of the scope at the bull's eye at the target distance and shoot, and then observe the position of the actual point of impact; ● Keep the aiming position still, and meanwhile press and hold the M button and C button to freeze the picture, and meanwhile, the freezing icon is displayed on the display; ● Press or press and hold the Power button or C button to move the position of the reticle, and press the M button to switch the moving direction until the center of the reticle is aligned with the position of the point of impact. For details, please refer to Chapter Nine "Zeroing Function". ● After the setting is completed, press and hold the M button to save the current position of the reticle and exit the zeroing function.

	
<p>Time</p> 	<p>Setting the system time</p> <ul style="list-style-type: none"> ● Press and hold the M button to go to the advanced menu screen; ● Press the Power button or C button to select the "Time" option; ● Press the M button to go to the time reset function interface, where the time is presented in the form of "yyyy/mm/dd hh:mm"; ● Press or press and hold the Power button or C button to set the correct year, month, day, hour, and minute;

	<ul style="list-style-type: none"> ● Press the M button to switch between the year, month, and day; ● After the setting is completed, press and hold the M button to save and exit the date reset function. 
<p>Info</p> 	<p>Querying device information</p> <ul style="list-style-type: none"> ● Press and hold the M button to go to the advanced menu screen; ● Press the Power button or C button to select the "Info" option; ● Press the M button to query the relevant information about the current scope; ● Press and hold the rotary encoder (7) to exit and return to the upper menu.

	
<p>Factory Reset</p> 	<p>Restoring factory default settings</p> <ul style="list-style-type: none"> ● Press and hold the M button to go to the advanced menu screen; ● Press the Power button or C button to select the "Factory Reset" function option; ● Press the M button to go to the "Factory Reset" confirmation interface; ● Press the Power button or C button to select "Yes" for restoring factory settings or "No" for canceling the operation; ● Press the M button to confirm the selection; ● If "Yes" is selected, the scope will re-start automatically; ● If "No" is selected, the operation is canceled and then return to the advanced menu. <p>After the Factory Reset is selected, the following functions will be restored to default settings:</p> <ul style="list-style-type: none"> ◆ Day mode ◆ Display brightness 2

	<ul style="list-style-type: none">◆ Reticle color: white◆ Reticle style: 1◆ Wifi: off◆ PIP: off◆ Gun type: G1◆ Battery type: 3.7V◆ Zeroing coordinate: reset to zero◆ Time: 2020.1.1 00:00 
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XV. Picture-in-Picture (PIP)

Picture-in-Picture (PIP) provides a floating window independent of the full screen. This window shows part of the image which is enlarged to 2× in a certain area centered on the reticle of the main image.

- On the home screen, press and hold the **M button** to go to the advanced menu;
- In the advanced menu, press the **Power button** or **C button** to select the Picture-in-Picture function option;
- Press the **M button** to turn on/off the **Picture-in-Picture** function;
- After enlarging the image on the home screen by pressing the power button, the image shown in the Picture-in-Picture (PIP) window is also synchronously enlarged to 2×



XVI. Status Auto Hiding

This function is used to hide the GUI automatically and save the reticle only so that there is no blocking on the image.

- In the advanced menu interface, press the **Power button** or **C button** to select the "Status Auto Hiding" option;
- Press the **M button** to select On or Off.
- After the status auto hiding is enabled, all GUI icons including the status bar will be automatically hidden and only the image and reticle are displayed if there is no operation within 8s.
- Press or press and hold any button to invoke the GUI information.
- You can operate the buttons and the menu only after the GUI information is displayed.

XVII. Wi-Fi

The SAIM NV series has a built-in Wi-Fi module. The device can connect wirelessly to a mobile apparatus (laptops or smartphones) via Wi-Fi.


- In the advanced menu, enable Wi-Fi. For detailed operations, refer to "Advanced Menu-Wi-Fi".
- After the Wi-Fi of the scope is enabled, search for the Wi-Fi signal with the name "Infiray_XXXXXX" on the mobile device, among which XXXXXX is a 6-bit serial

number composed of digits and letters.

- Select the Wi-Fi, enter the password and connect. The initial password is 12345678;
- After Wi-Fi access, you can control the scope via the mobile app.

Setting Wi-Fi name and password

The SAIM NV series allows you to change the name and password of the Wi-Fi in the app.

- After the scope is connected to the mobile device, locate the "Settings" icon  in the InfiRay Outdoor image screen and tap it to open the "Settings" screen;
- In the text box, enter and submit the new Wi-Fi name (SSID) and password.
- After submitting the change, reset the device to activate the settings.

Caution! After the device is restored to the factory setting, the name and password of the Wi-Fi will also be restored to the default factory setting.

XVIII. Product Update and Description to APP

The SAIM NV series supports control with an app. You can transmit images in real time, operate the device, and update the program by connecting a smartphone or laptop via Wi-Fi.

You can download the user manual of InfiRay Outdoor at our official website (www.infirayoutdoor.com).

You can also test and update the firmware program of the product via the InfiRay Outdoor app or download it on our official website.

About InfiRay Outdoor

- You can download and install the InfiRay Outdoor app on the official website (www.infirayoutdoor.com) or an app store. Alternatively, you can scan the QR code below to download it for free.



- After installing the app, open it.
- If your device has been connected to a mobile device, enable mobile data on it. After the device accesses the Internet, an update prompt will be displayed automatically. Click Now to download the latest version immediately or click Later.
- InfiRay Outdoor saves the last connected device automatically. Therefore, once you open InfiRay Outdoor, it automatically detects an update in the background even when the scope is not connected to a phone or laptop. If an update is available and the mobile device accesses the internet, you can download the update first. After the download is completed, the scope will be connected to the mobile device, the version will be updated automatically.
- After the update is installed, the device will restart and enter the operation mode.

XIX. Technical Inspection

Perform a technical inspection to check the following items each time before you use the device:

- Exterior of the device (no crack on the enclosure).
- Lens and eyepiece (no crack, oil, stain, or other sediments)
- Status of the rechargeable battery (fully charged in advance) and electrical contact (no salinization or oxidation).

XX. Product Maintenance

The device must be maintained in the following ways at least twice each year:

- Wipe the surface of metal and plastic parts to clear off dust and dirt by using a cotton cloth.

Apply silicone grease if required.

- Use non-greasy organic solvent to wash the electric contact and slot of the battery.
- Check the glass surface of the eyepiece and lens. If necessary, clear off the dust and sand on the lens (preferably using a non-contact method). Use a specialized wiping tool and solvent to clean the optical surfaces.

XXI. Troubleshooting

The following table lists all problems that are likely to occur during device operation. Check and address problems by referring to this table. If faults not included in this table occur or you cannot fix the fault, return the device to the vendor or supplier for troubleshooting.

Faults	Possible Causes	Solutions
The scope cannot be started	The battery is out of charge	Charge the battery
The device cannot be powered by using 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
Images are unclear, vertical lines are present, or the background is not even	Calibration is required	Calibrate the images as instructed in Section 9 of the user manual
Images are too dark	The display is not bright enough	Adjust the display brightness
Icons are clear but images are blurry	The lens is not focused	Rotate the lens focus ring to adjust the focus
	The inner or outer optical surface of the lens is dusted or iced	Wipe the outer optical surface by using a soft cotton cloth or leave the scope to dry in a warm and dry environment for more than 4 hours

<p>The position of the reticle moves after shooting</p>	<p>The scope or the fixing clamp is not installed firmly</p>	<p>Check whether the scope is installed firmly.</p> <p>Ensure that the bullet type and caliber you use are consistent with that used for zeroing.</p> <p>If you perform zeroing in summer but use the scope in winter (or vice versa), the zeroing point may move slightly.</p>
<p>The scope cannot focus</p>	<p>Configuration error</p>	<p>Set the scope according to the contents as specified in "Startup and Image Setup".</p> <p>Check the outer surface of the objective lens and eyepiece, and if necessary, wipe off any dust and frost on it.</p> <p>In cold weather, a special antifogging coating can be applied (such as those used on eyeglasses or car rearview mirrors).</p>
<p>The device cannot connect to a smartphone or computer</p>	<p>The Wi-Fi password is incorrect</p>	<p>Enter the correct password</p>
	<p>There are too many Wi-Fi networks in the range of the device, which may cause interference</p>	<p>To enable stable network access, you are advised to move the device to an area with a limited number of Wi-Fi networks, or an area without Wi-Fi coverage.</p>
<p>Wi-Fi signals are lost or interrupted.</p>	<p>The device is beyond Wi-Fi coverage. There is blocking (such as</p>	<p>Move the device to a place where you can receive Wi-Fi signals.</p>

	concrete walls) between the device and the receiver.	
The observed target disappears	You are observing the target through the glass	Observe the target directly without the presence of glass
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).	

Important safety information

Environmental influences

- Never point the lens of the device directly at intense heat sources such as the sun or laser equipment. The objective lens and eyepiece can function as a burning glass and damage the interior components.
- Avoid touching the metal surface (cooling fins) after exposure to sunlight or cold.

Ergonomics notes

Take breaks after longer periods of use to avoid wrist pain.

Risk of swallowing

Do not place this device in the hands of small children. Incorrect handling can cause small parts to come loose which may be swallowed.

Safety instructions for use

- Handle the device with care: rough handling can damage the internal battery.
- Do not expose the device to fire or high temperatures.
- Install the batteries correctly according to the instruction on the device. Reverse connection is prohibited.
- If the device has been damaged, send the device to our after-sales service for repair.

User information on the disposal of electrical and electronic devices (private households)



2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points.

For more information see: www.recyclethis.info.

Intended use

The device is intended for displaying heat signatures during nature observation,

remote hunting observations and for civil use. This device is not a toy for children. Use the device only as described in this operating manual. The manufacturer and the dealer accept no liability for damages which arise due to non-intended or incorrect use.

Function test

- Before use, please ensure that your device has no visible damage.
- Test to see if the device displays a clear, undisturbed image.
- Check that the settings for the device are correct.

Installing/removing the battery

The CLIP NV series day & night scope need to install two CR123 (3.7V) or 16650 batteries for use. Refer to the section **Battery Installation** for details.

Legal and Regulatory Information

Wireless transmitter module frequency range:

WLAN: 2.412-2.472GHz (For EU)

Wireless transmitter module power<20dBm (only for EU)



IRay Technology Co., Ltd. thus declares that the AFFO series thermal imaging monocular complies with the directives 2014/53/EU



and 2011/65/EU. The full text of the EU declaration of conformity as well as additional information are available at: www.infrayoutdoor.com.

This device may be operated in all member states of the EU.

Regulatory information USA

FCC ID: 2AYGT-254-1

Labeling requirements

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Information to the user

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

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications 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.

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

Body-worn Operation

This device was tested for typical body-support operations. To comply with RF exposure requirements, a minimum separation distance of 0.5cm must be maintained between the user's body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.

We, IRay Technology Co., Ltd., hereby declare that this product was tested conforming to the applicable FCC rules under the most accurate measurement standards possible, and that all the necessary steps have been taken and are in force to assure that production units of the same equipment will continue to comply with the Commissions requirements.