Medusa Series

USER MANUAL

Thermal Imaging Device

M4-225

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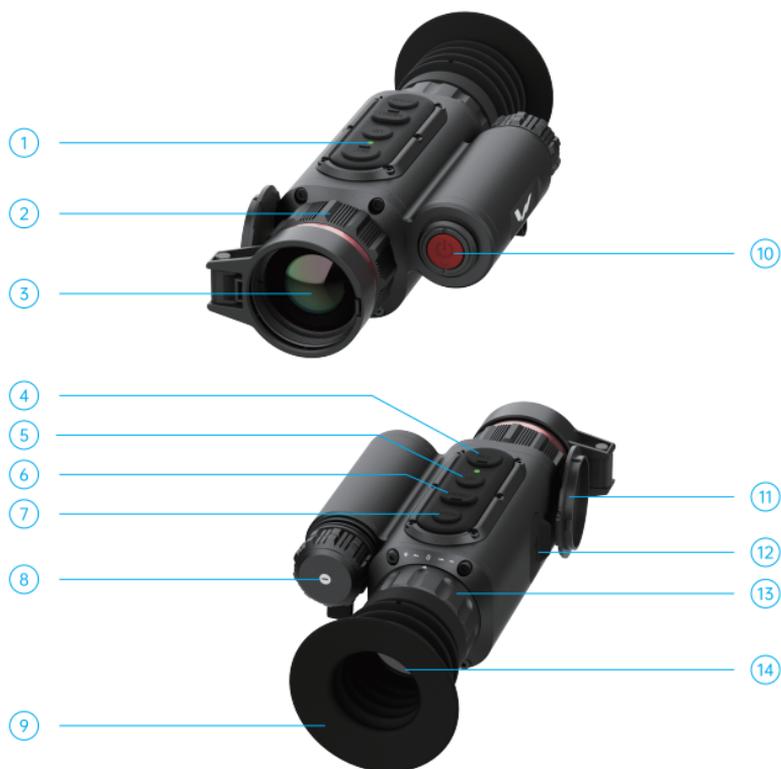# 1. Product Overview

1. M4-225 is an infrared thermal imaging device designed for observation and ranging in nighttime and adverse weather conditions.

2. The infrared optical system captures the infrared radiation emitted by the target. The spectral filter reflects the distribution of the target's infrared radiation energy onto the photosensitive elements of the infrared detector array on the focal plane. The detector converts the infrared radiation into electrical signals, which are then amplified and processed by the readout circuit.

3. The core component digitizes the detector's output signals and performs initial infrared image correction, bad pixel elimination, brightness and contrast control, Fusion rendering, and overlay of interfaces and crosshairs. The processed signals are sent to the OLED display. The operator observes the infrared thermal imaging of the target through the 12X eyepiece.

2.Product Components

1. Device Indicator	2. Objective Lens Focus Ring	3. Objective Lens	4. Photo/Video Recording Button (REC)
5. Up Navigation Button	6. MENU Button	7. Down Navigation Button	8. Battery Compartment Cover
9. Eyepiece Eyecup	10. Power Button	11. Lens Cap	12. Data Compartment Cover
13. Eyepiece Focus Ring	14. Eyepiece Lens		

3. Package Contents

- M4-225 Thermal Imaging Device
- Handbag
- Type-C Data Cable
- 18650 Battery
- User Manual
- 5V/2A Adapter
- Mount (with screws, hex nuts, and wrench)

4. Operation Instructions

4.1. Warnings

(1) Do not point the thermal imaging Device directly at high-intensity radiation sources such as the sun, CO_2 lasers, or welding machines.

(2) The interval between power cycles should be at least 20 seconds.

(3) The thermal imaging Device combines precision optical instruments and electrostatic-sensitive electronic components. Avoid dropping, striking, or vibrating the device to prevent structural deformation or misalignment.

(4) Do not disassemble the thermal imaging Device. Contact the manufacturer for any malfunctions to avoid voiding the warranty.

(5) Remove the battery when not in use or during transportation, and store the device in a protective case.

(6) Replace the battery promptly when it is low to avoid damage from over-discharge.

(7) Using the device outside the specified environmental conditions may cause damage.

4.2. Notes

(1) Clean non-optical surfaces with a clean, soft, dry cloth. Avoid chemical solvents or thinners.
(2) The infrared lens is coated with an anti-reflective film. Clean only when visibly dirty, using a dedicated lens cloth. Avoid touching the lens surface, as fingerprints can damage the coating.
(3) Power off the device when not in use to extend its operational life.

5. Button Functions

⏻ Power Button:

(1) Press and hold for 3 seconds to power on/off.
(2) Press and hold for 1-3 seconds to enter sleep mode. Short-press to wake from sleep mode.
(3) Short-press to refresh in observation mode (NUC).

REC ░ Photo/Video Button:

(1) Short-press to take a photo.
(2) Press and hold for more than 1.5 seconds to start/stop recording.

UP Up Navigation Button:

(1) Short-press to navigate up, when out of MENU short-press to switch palettes.
(2) Press and hold to enable/disable picture-in-picture.

MENU MENU Button:

(1) Short-press to access the MENU. Press the UP and DOWN buttons to choose the MENU options, and short-press the MENU button to enter the secondary MENU.
(2) When in the MENU interface, hold the MENU button to return to the previous MENU.

DOWN Down Navigation Button:

(1) Short-press to navigate down, when out of MENU, short-press to switch maginification (1x, 2x, 4x, 8x).
(2) Long-press to turn off/ turn on the crosshair display.

6. MENU Functions

Icon	Main MENU	Description
⊞	Mode Selection	The device provides 5 color palettes for option, White Hot, Low Light, Black Hot, Red Hot, and Pseudocolor. The default is "White Hot". When in the MENU operation interface, press the navigation UP/DOWN buttons briefly to switch palettes, and press the MENU button briefly to confirm and exit. White Hot Low Light Black Hot Red Hot Pseudocolor
📶	WiFi	1. Open the WiFi function in the machine MENU, open the mobile phone WiFi and the applicable software APP, find the MAC address name of the mobile phone WiFi "V3XXXXXXXX", enter the password "12345678" to connect the device. 2. After connecting the device and phone via WiFi, real-time video will appear on the phone's screen.
⧉	Picture-in-Picture	Press the MENU button to enter the subpage, press "UP" or "DOWN" to select on or off, and press the MENU button briefly to confirm.
┼	Reticle Type	The device offers 10 different reticle styles, including an option to turn them off. By default, it displays Number 1 reticle.
⊕	Reticle Color	The reticle color options include five choices: "Black, White, Gray, Red, and Green," with the default color set to "Black." To select the reticle color, briefly press the navigation button to access the "Reticle Color" option. Press the MENU button, and a list will appear on the right: "Black - White - Gray - Red - Green." Use the up and down navigation buttons to switch between selections, and press the MENU button briefly to confirm and return to the previous MENU. Upon initial startup, the default reticle color is set to white.
▭	Reticle Profiles	Used to save the ballistic zero point parameters set by the user. Press the MENU MENU button enter the sub-page, and press "up" or "down" to select the stored user ballistic zero point setting.
⊕	Reticle Zeroing Adjustment	Press the MENU button briefly to freeze the image. Press the photo button briefly to move to the X and Y axis values. Use the up and down buttons to adjust the crosshair position until it aligns with the impact point. Press the photo button briefly to move to other options. Once settings are complete, navigate to the save option and press the MENU button briefly to save and exit. Long press the MENU button to discard changes. The set distance will be saved in the zero storage MENU as the zero point name.

⌀	Gyro	Press the MENU button to enter the sub menu. Use the "Up" or "Down" buttons to select either "On" or "Off," and briefly press the MENU button to confirm your selection.
☀	OLED Brightness	Press the UP/DOWN buttons to select "OLED Brightness," then press the MENU button. A submenu appears on the right. Use the UP/DOWN buttons to adjust the brightness level. Press the MENU button to confirm and return.
☼	Image Brightness	The brightness adjustment allows you to increase or decrease the brightness of the image. There are 10 brightness levels available, ranging from dim to bright. The default brightness setting upon initial startup is "5." Users can select an appropriate brightness level based on personal viewing preferences and current environmental conditions. Press briefly the UP and Down navigation buttons to select the "Brightness" option. Then, press the MENU button, and a secondary MENU will appear on the right. Press the UP/DOWN buttons briefly to select the desired level. Then, press the MENU button to confirm and return to the previous menu.
◐	Contrast Ratio	The contrast Ratio adjustment allows you to increase or decrease the contrast ratio of the image, making the target more distinct. Contrast levels range from 1 to 10, progressing from weak to strong. The default contrast ratio setting upon initial startup is "5." Users can select an appropriate contrast level based on personal viewing preferences and current environmental conditions. Press briefly the up and down navigation buttons to select the "Contrast Ratio" option. Then, press the MENU button, and a secondary MENU will appear on the right. Press the UP/DOWN buttons briefly to select the desired level. Then, press the MENU button to confirm and return to the previous menu.
△	Image Detail Boost	Press the MENU button to access the "Image Detail Boost" option. The higher the numerical value, the more details are enhanced.
⚙	Advanced Settings	▶ Date/Time Select the 'Date/Time' MENU, then briefly press the MENU button to enter sub-options. Use short presses of the MENU button to navigate between options, and use the up/down Buttons to adjust values. Once adjustments are complete, briefly press the MENU button again to save and exit. ▶ Language The device supports English and other languages, with English as the factory default. To adjust the language settings, first press the UP/DOWN buttons briefly to select "Multilingual" in the menu. Then, press the MENU button briefly to open the submenu. A secondary menu will appear on the right side. Use the UP/DOWN buttons to navigate and select the desired language, then press the MENU button briefly to confirm and return. If you wish to exit without saving changes, hold the MENU button until the operation is canceled. This process allows users to customize language preferences according to their needs while maintaining intuitive navigation through the device's interface.

⚙	Advanced Settings	▶ Audio Recording Select "Record Audio" with the cursor, then press the MENU button to open a submenu. Choose "Open" or "Close" to enable or disable audio recording with voice input. ▶ Format Access the formatting submenu, briefly press the MENU button to select "Confirm" or "Cancel". Proceed with caution: Data cannot be recovered once deleted! ▶ Auto Power Off After selecting "Default Settings," press the MENU button to access the sub menu. In the sub menu, choose from "3 minutes," "5 minutes," or "Off." The default setting is "Off." After powering on, you can select automatic Power Off after 3 or 5 minutes. ▶ Default Settings After selecting 'Default Settings' with the cursor, press the MENU button to open the sub menu. On the sub menu, choose 'Confirm' or 'Cancel' to restore default settings. If confirmed, the system will revert to factory default settings—please proceed with caution. ▶ Pixel Fix To repair defective pixels, press briefly the MENU button to enter the menu mode and navigate to the "Dead Pixel Repair" option. Follow the on-screen instructions: First, press the MENU button briefly to activate the function, which will prompt "Please aim at an evenly lit surface and press MENU!". Press the MENU button again to start the calibration process. The system will automatically repair the defective pixels and display "Calibration successful!" upon completion. Afterward, it will automatically return to the previous menu. ▶ Image adjustment To correct the image, press the MENU button briefly to enter the menu mode, then navigate to "Image Correction" and activate it. Follow the on-screen prompts: First, the system will display "Please cover the device lens cap and press MENU to start calibration!". Press the MENU button briefly again to begin the process. The system will automatically calibrate and display "Calibration successful!" upon completion. It will then return to the previous menu automatically. ▶ Version Press the navigation buttons briefly to select the "Version Information" option, then press the MENU button to confirm. This will display the software version information of the device.

7. Device Connection

Download the dedicated app to connect the device to your mobile device via WiFi.
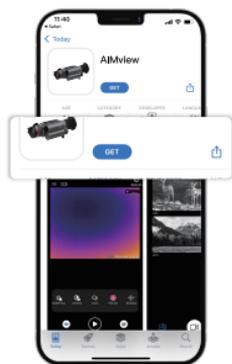

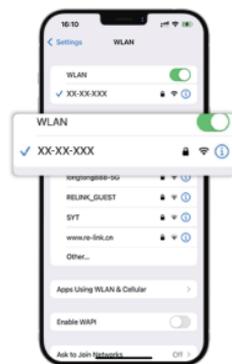Android/iOS: Scan to download

Search "AIMview" on Google Play to Download.

Download and install the app

Turn on the device and enable WiFi.l

Select WiFi "xx." and connect

(Default WiFi password: **12345678**)

8. Technical Specifications

56.3mm

83.2mm

185.3mm

M4-225

Sensor:	
Type	Uncooled Vanadium Oxide (VOx)
Resolution	256x192
Frame Rate	50 Hz
Pixel Size	12μm
NETD	≤30mk
Optics:	
Objective Lens	19/25mm/F1.0
Base Magnification	2.7X/3.5X
Digital Zoom	1x / 2 x/ 4 x/ 8x
Exit Pupil Distance	50 mm
Diopter Adjustment	+5/-5 D
Focus Distance	2m - ∞
Field of View	9.2°×7°/7°×5.3°
Detection Range (Target Size: 1.7m x 0.5m)	900m/1300m

Display:	
Color Modes	White Hot, Low Light, Black Hot, Red Hot, Pseudocolor
Type/Resolution	0.39-inch / OLED / 1024X768
Power:	
3D Gyroscope	Yes
Power Supply	3-4.2 V
Battery	18650 Li-ion, 3500mAh
External Power	5V (USB)
Runtime	5 hours
Shock Resistance	10000 J
Waterproof Rating	IP67
Operating Temperature	-20℃~+50℃
Size	185.3x83.2x56.3mm
Weight	461g
Recorder:	
Video/Photo Resolution	1024x768
Video/Photo Format	.mp4 / .jpg
Storage Card	Built-in 32GB Memory Card
Wireless Channel:	
Frequency	2.4GHz
Standard	802.11 b/g
WiFi Range	15m

9. Maintenance and Care

(1) Power off the device when not in use to extend its operational life.

(2) Avoid touching the lens surface. Clean only when necessary using a dedicated lens cloth.

(3) Remove the battery during storage or transportation.

(4) Store the device in a cool, dry environment.

(5) Clean the exterior with a soft, dry cloth. Avoid chemical solvents.

(6) The thermal imaging Device lens should only be cleaned when visibly dirty. Avoid touching the lens surface, as the acidic substances left by fingerprints can damage the coating and lens surface. Use only a dedicated lens cloth for cleaning.

(7) Perform a power-on check and calibration every six months if the device is unused for an extended period.

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.
(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.

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