Sytong

XS Series

USER MANUAL

Hand-Held Thermal Imaging Monocular



XS2.0-625/635L

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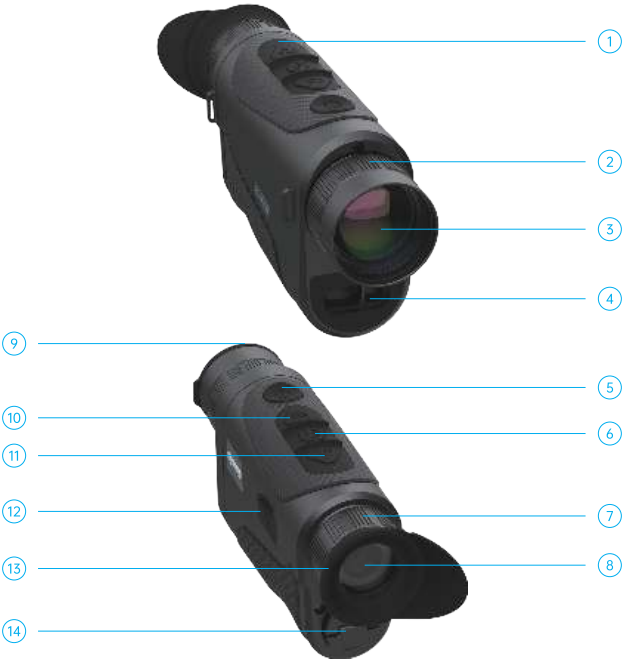
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1. Product Overview

1. XS2.0-625/635L is an infrared Hand-Held Thermal Imaging Monocular designed for observation and ranging under low-light or adverse weather conditions.
2. The device detects thermal radiation from target objects. The thermal imaging module captures the image signal, processes it, and transmits it to an OLED display. Users can then view a magnified, clear image through the eyepiece. Additionally, real-time image observation, monitoring, and system adjustments can be performed via a smartphone app.
3. High-resolution thermal imaging module paired with a large-aperture infrared lens, delivering high-quality thermal images.
Adjustable eyepiece focus, allowing clarity optimization for targets ranging from 5 meters to infinity.

2. Product Components



1. Device indicator light	2. Objective lens focus ring	3. Objective lens
4. Rangefinder module	5. Power switch	6. Menu button
7. Eyepiece focus ring	8. Eyepiece	9. Lens Cap
10. Navigation Button Up	11. Navigation Button Down	12. Data Storage Compartment Cover
13. Eyepiece Eyecup	14. Battery Compartment Cover	

3. Package Contents

- XS2.0-625/635L Hand-Held Thermal Imaging Monocular
- 18650 Battery
- Anti-Slip Wrist Strap
- Type-C Data Cable
- 5V/2A Adapter
- User Manual

4. Operation Instructions

4.1. Warnings

(1) Do not point the Hand-Held Thermal Imaging Monocular at the sun, CO_2lasers, welding machines, or other high-intensity radiation sources.
(2) The interval between two power cycles should be at least 20 seconds.
(3) Handle with care during operation. Avoid dropping, striking, or subjecting the device to vibrations, as this may damage optical/electronic components or cause structural deformation.
(4) Do not disassemble the Hand-Held Thermal Imaging Monocular. In case of malfunction, contact the manufacturer immediately. Unauthorized disassembly will void the warranty.
(5) When not in use or during transportation, remove the battery and store the Hand-Held Thermal Imaging Monocular in a protective carrying case.
(6) Replace the battery promptly when the battery level is low to prevent deep discharge, which may damage the battery.
(7) Using the device outside the specified operating conditions may cause damage to the Hand-Held Thermal Imaging Monocular.

4.2. Usage Method

(1) Unpack the Hand-Held Thermal Imaging Monocular, install the battery, then press and hold the power button for 3 seconds to turn it on.
(2) Look through the eyepiece at the internal display, and manually adjust the diopter ring until the symbols and numbers on the screen appear sharp and clear.
(3) Aim the thermal imaging lens at the target object, then fine-tune the diopter ring of the imaging module until the observed object is in clear focus.

4.3. Precautions

(1) Clean the product's optical components (thermal imaging objective lens, eyepiece, and laser rangefinder lens) only when dirt affects image quality. Method: Gently wipe the soiled area of the lens surface with a lens cloth lightly moistened with alcohol. Avoid excessive rubbing to prevent damage to the anti-reflective coating.
(2) Turn off the device immediately after use or if no observation is performed for an extended period after startup. This helps prolong the effective service life of the Hand-Held Thermal Imaging Monocular.

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.

Up Navigation Button

(1) Press briefly to navigate up or switch display modes.

(2) Press and hold for 1.5-3 seconds to take a photo; hold for over 3 seconds to start/stop video recording.

Menu Button

(1) Press briefly to access the menu. Use the navigation buttons to move through options.

(2) Press and hold to return to the previous menu level in menu mode。

Down Navigation Button

(1) Press briefly to navigate down or switch magnification (1x, 2x, 4x, 8x).

(2) Press and hold to enable/disable the rangefinder.

6. Menu Functions

Icon	Main Menu	Function Description
	Mode Selection	Mode options include 5 items: "White Hot, Black Hot, High Light, Low Light, Fusion". Default mode is White Hot.  White Hot  Black Hot  High Light  Low Light  Fusion
	WiFi	1. Turn on Wi-Fi in the device menu, then enable Wi-Fi on your phone and open the testing software APP. Locate the MAC address named "APPshow-XX-XXXXX" in your phone's Wi-Fi list, enter password "12345678" to connect the device. 2. After connecting the device to the phone via Wi-Fi, real-time captured images can be viewed.
	Ranging Unit Selection	Two options available: Meters / Yards
	Screen Brightness	Press the menu button to enter brightness settings with 10 options. Selecting any option causes corresponding changes in the screen display. Choose the appropriate level based on usage preference.
	Contrast	Press the menu button to enter contrast settings with 10 options. Selecting any option causes corresponding changes in the imaging display. Higher values result in stronger image contrast.
	Image Detail Boost	Press the menu button to enter image detail enhancement options. Higher values reveal more details.
	Advanced Settings	▶ Date/Time Select "Date/Time" menu, short-press menu button to enter sub-options. Short-press menu button to move between options, short-press Up/Down keys to adjust values. Long-press menu button to save and exit after adjustment. ▶ Multi-language Press the menu button to enter the language settings. Use the Up/Down keys to select the desired language, then short-press the menu button to confirm.

	Advanced Settings	▶ Recording Audio Move cursor to "Recording Audio" and press menu button to open sub-menu. Select "On" or "Off" to enable/disable audio recording during video capture. ▶ Format Enter format sub-menu, short-press menu button to select "Confirm" or "Cancel". Operate with caution! Data cannot be recovered after deletion! ▶ Auto Shutdown Options: 3 minutes, 5 minutes, Off (Default). After powering on, users can select either 3 or 5 minutes for automatic shutdown. ▶ Default Settings Move cursor to "Default Settings" and press menu button to open sub-menu. Select "Confirm" or "Cancel" to restore factory default settings. Operation will reset device to factory default state. Proceed with caution. ▶ Dead Pixel Repair Move cursor to "Dead Pixel Repair" menu, short-press menu button to enter sub-menu. Toggle between "Auto Repair" and "Manual Repair" modes using Up/Down keys. Cover the lens cap before repair and follow prompts. (1) Select "Auto Repair", short-press menu button to complete repair. (2) Select "Manual Repair", move cursor with Up/Down keys, toggle options with Power button, short-press menu button to save. ▶ Image Calibration Enter Image Calibration menu. To calibrate, select "Confirm", cover the lens cap, then short-press menu button to calibrate background image uniformity. Calibration results save automatically upon completion. ▶ Version Information Move cursor to "Version" and press menu button to view device software version information.

7.Device Connection

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

Android/iOS: Scan to download

Google Play

Search "XVision" on Google Play to Download.



Download and install the app

Turn on the device and enable WiFi.



Select WiFi "xx." and connect

(Default WiFi password:12345678)

Open the App

8. Specifications





51.55mm

177.45mm/185.85mm

XS2.0-625/635L

Sensor	
Type	Uncooled Vanadium Oxide (VOx)
Resolution	640x512
Frame Rate	50 Hz
Pixel Size	12μm
NETD	⩽18mk
Optics	
Objective Lens	25/35mm/F1.0
Base Magnification	1.4X/2X
Digital Zoom	1x / 2 x/ 4 x/ 8x
Eye Relief	30mm
Diopter Adjustment	+5/-5 D
Focus Distance	5m - ∞
Field of View	17.5°X13.1°/12.5°X9.4°
Detection Range (Target Size: 1.7m x 0.5m)	1250m/1750m

Display	
Operating Modes	White Hot, Black Hot, High Light, Low Light, Fusion
Type/Resolution	0.39 inch / OLED / 1024X768
Power	
Voltage	3-4.2 V
Battery	18650 Li-ion, 3500mAh
External Power	5V (USB)
Runtime	5 hours
Waterproof Rating	IP67
Operating Temperature	-20°C~+50°C
Dimensions	177.45×51.55×82.85mm/185.85×51.55×82.85mm
Weight	394g/402g ±5g
Recording	
Video/Photo Resolution	1024x768
Video/Photo Format	.mp4 / .jpg
Storage	Built-in 32GB memory card
Wireless	
Frequency	2.4GHz
Standard	802.11 b/g
WiFi Range	15m
Rangefinder	
Wavelength	905nm
Maximum Range	1000m
Accuracy	+/-1m

9. Maintenance and Care

(1) The lens of Hand-Held Thermal Imaging Monocular is a critical optical component. During installation and use, avoid contact with oil, chemicals, or other contaminants that may damage the lens surface. Always cover the lens with the lens cap after use.
(2) When not in use or during transportation, remove the battery and store the Hand-Held Thermal Imaging Monocular in its protective case.
(3) For long-term storage or periods of inactivity, keep the Hand-Held Thermal Imaging Monocular in a cool, dry environment.
(4) Do not clean the housing of the Hand-Held Thermal Imaging Monocular with chemical solvents or thinners. Instead, use a clean, soft, and dry lint-free cloth.
(5) If the device is not used for an extended period, power it on and perform a calibration check at least once every six months.

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