FALCON

Titan Series

USER MANUAL

Thermal Imaging Telescope

T2-635

CONTENTS

1. Product Overview

1.1 The T2-635 is a thermal imaging telescope used for observation and searching in nighttime and adverse weather conditions.

1.2 This product identifies the thermal radiation of target objects, captures image signals through a thermal imaging module, processes them, and transmits to OLED display. Users can obtain clear images through an eyepiece. Additionally, users can monitor real-time images via a mobile app, adjust settings, and perform operations.

1.3 The thermal imaging system uses a high-pixel thermal imaging module paired with a large aperture lens to produce high-quality thermal images. It also allows focusing adjustment from 5 meters to infinity.

2. Product Components

1.Device Indicator Light	2.Battery Compartment Cover	3.Objective Focus Ring
4.Objective Lens	5.Lens Cap	6.Eyepiece
7.Data Compartment Cove	8.Up Navigation Key	9.Menu Key
10.Down Navigation Key	11.Power Button	

3. Package Contents

- ▶ T2-635 Thermal Imaging Telescope
- ▶ 18650 Battery
- ▶ Carrying Case
- ▶ Type-C Cable
- ▶ User Manual
- ▶ 5V2A Adapter
- ▶ Tripod Mount

4. Operation Instructions

4.1. Warnings

(1) Do not point the thermal imaging telescope directly at the sun, CO2 lasers, or welding machines.

(2) Ensure there is at least a 20-second interval between turning the device on and off.

(3)Handle the device carefully; avoid dropping, striking, or shaking it.

(4)Do not disassemble the device. Contact the manufacturer if there are any issues.

(5)Remove the battery when not in use or during transportation.

(6)Replace the battery promptly when the power is low.

(7)Avoid using the device outside the specified operating environment.

4.2. Usage Methods

(1) Open the package and remove the thermal imaging telescope. Install the battery and press and hold the power button for 3 seconds to turn it on.

(2) Look through the eyepiece and manually adjust the eyepiece ring until the symbols and numbers on the internal display are clear.

(3) Point the thermal imaging lens at the target object and adjust the focus ring until the image is clear.

4.3. Notes

(1) Clean optical components (thermal imaging objective lens, visible light eyepiece) only when debris affects image quality. Use a lens cloth lightly dampened with alcohol to gently wipe soiled areas, preventing damage to the anti-reflective coating.
(2) Power off the thermal imaging telescope immediately after use or when idle for extended periods to extend service life.
(3) Never point the thermal imaging telescope directly at the sun or high-intensity light sources during operation. Excessive infrared radiation may cause signal interference and image blurring.

5. Button Functions

Power Button

(1) Press and hold the power button for 3 seconds to turn on the device. While the device is on, press and hold the power button for 3 seconds to turn it off.
(2) While the device is on, press and hold the power button until the display enters sleep mode and the sleep icon appears. Press the power button briefly to wake up the device.
(3) While the device is on and not in sleep mode, press the power button briefly to switch the thermal imaging shutter for image calibration.

Up Navigation Key

(1) Short-press to switch images;
(2) Long-press to take a photo;
(3) When the menu is open, short-press to select upward.

Menu Key

(1) Press briefly to bring up the menu, use the up and down keys to move between menu options, and press briefly again to enter the secondary menu. In menu mode, press and hold to return to the previous menu.

Down Navigation Key

(1) Long-press to start recording, then long-press again to stop recording.
(2) Short-press the navigation key to switch between zoom levels, and cycle through the zoom levels.
(3) When the menu is open, short-press to select the option below.

6. Menu Functions

Icons	Main Menu	Function Descriptions
⊞	Operation Modes	Choose from: White Hot, High Contrast, Black Hot, Low Light, Pseudo Color (default: White Hot). White Hot High Contrast Black Hot Low Light Pseudo Color
📶	WIFI	1. Enable WiFi in the device menu. Launch both your phone's WiFi and the dedicated testing app. Locate the MAC address: "APPshow-xx-xxxxx" in your WiFi list, then connect using password "12345678". 2. Upon successful WiFi pairing, you will observe the real-time thermal imaging feed on your mobile interface.
⊞	Calibration	Press the menu button briefly to enter the submenu, press the power button briefly to switch options, use the up and down navigation buttons to adjust the X and Y values, and press the menu button briefly to save.
☀	Brightness	Press briefly the Menu key to access the Brightness menu, which offers 10 options. Selecting any option will result in corresponding changes to the screen display. Choose a suitable level based on your usage preferences.
☼	Image Brightness	Press briefly the Menu key to access the Contrast menu, which offers 10 options. Selecting any option will result in corresponding changes to the image brightness.
◑	Contrast	Press briefly the Menu key to access the Contrast menu, which has 10 options. Selecting any option will cause corresponding changes to the image display. The higher the value, the stronger the image contrast.
⚠	Detail Enhance	Press briefly the Menu key to access the Image Detail Enhancement option. The higher the value, the more detail is visible.
🕐	Date/Time	Select the 'Date/Time' menu, press the Menu key briefly to enter the submenu, press the Menu key briefly to navigate between options, use the Up/Down navigation keys to adjust values, and long-press the Menu key to save and exit after adjustments.
🌐	Language	Press briefly the Menu key to access the Language Settings menu. Use the Up/Down navigation keys to select the desired language, then short-press the Menu key to confirm.

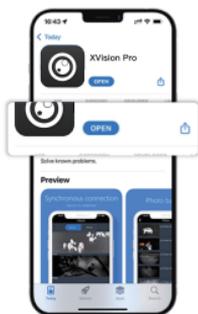|		
🎤	Audio Record	Use the cursor to select the 'Recording Audio' option, then press the Menu key to open the submenu. Navigate to 'On' or 'Off' in the submenu to enable or disable audio recording during video capture.
🔖	Format	Access the format submenu. Press the menu key briefly to select CONFIRM or CANCEL. Warning: Exercise extreme caution when confirming! All data will be permanently erased upon deletion!
⏻	Auto Power Off	Options: 3 minutes, 5 minutes, Off, Default: Off. When the device is turned on, users can select either 3 or 5 minutes for automatic shutdown.
🜂	Defaults	Use the cursor to select 'Default Settings', then press the Menu key to open the submenu. In the submenu, choose 'Confirm' or 'Cancel' to restore default settings. Confirming will revert the device to factory default settings. Proceed with caution!
⊞	Bad Pixel	Select the "Dead Pixel Repair" menu with the cursor, press the menu key briefly to enter the submenu, and use the up and down navigation keys to switch between "Automatic Repair" and "Manual Repair" modes. If repair is needed, cover the lens cap and follow the prompts to perform the dead pixel repair operation. (1) Select "Auto Repair," then press the menu key briefly to complete the repair. (2) Select "Manual Repair," use the up and down navigation keys to move the cursor, press the power key to switch options, then press the menu key briefly to save.
🖼	Image Correction	Enter the Image Correction menu. If image correction is required, select 'Confirm', cover the lens with the lens cap, and briefly press the Menu key to calibrate the background image uniformity. The device will automatically save changes and exit after calibration.
i	Version	Use the cursor to select 'Version', then briefly press the Menu key to view the device's 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

Search "XVision" 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)

Open the App

8. Technical Specifications

55mm

48mm

150.6mm

T2-635

Sensor	
Type	Uncooled Vanadium Oxide
Resolution	640x512
Frame Rate	50 Hz
Pixel Size	12μm
NETD	≤18mk
Optics	
Objective Lens	35mm/F1.0
Base Magnification	1.7X
Digital zoom	1x / 2 x/ 4 x/ 8x
Exit pupil Distance	10mm
Diopter Adjustment	+5/-5 D
Focus Distance	5m - ∞
Field ofview	12.5°X9.4°
Detection Range (Target size: 1.7m X 0.5m)	1750m

Display	
Type/Resolution	0.39 inch / OLED / 1024X768
Power	
Power Supply	3-4.2 V
Battery	18650 Lithium Battery / 3500mAh
External Power	5V (USB)
Runtime	5小时
Waterproof Rating	IP67
Operating Temperature	-20℃~+50℃
Size	150.6x55x48mm
Weight	510g ±5g
Recording	
Video/Photo Resolution	1024x768
Video/photo Format	.mp4 / .jpg
Storage card	Built-in 32GB Memory card
Wireness Channel	
Frequency	2.4GHz
Standard	802.11 b/g
WiFi Range	15m

9. Maintenance And Care

9.1 The telescope lens, laser rangefinder lens, and illumination lens are critical optical components. During installation and use, avoid exposing them to oil, grease, or chemical substances that may stain or damage the lens surfaces. After use, cover the lenses with protective caps and return the spotlight to its original position.

9.2 When the thermal imaging telescope is not in use or during transportation, remove the battery and store the device in its original packaging box.

9.3 For long-term storage or periods of inactivity, store the thermal imaging telescope in a cool, dry environment.

9.4 Do not use chemical solvents, thinners, or abrasive materials to clean the device housing. Wipe it gently with a clean, soft, and dry cloth.

9.5 If the device is stored for extended periods, power it on every six months to perform a functional check and calibration.

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.

FALCON

Thermal Imaging & Night Vision
www.falconoptic.com