

Guide Sensmart TK421

User Manual: TK Series Thermal Vision Monocular

Model: TK421 | Brand: Guide Sensmart

INTRODUCTION

The Guide Sensmart TK421 Thermal Vision Monocular is a high-performance device designed for enhanced visibility in various outdoor conditions, particularly low light or darkness. Featuring a 400x300 resolution sensor and a 50Hz refresh rate, it provides clear thermal imaging for applications such as hunting, wildlife observation, and surveillance. Its compact and durable design ensures reliable operation in challenging environments.

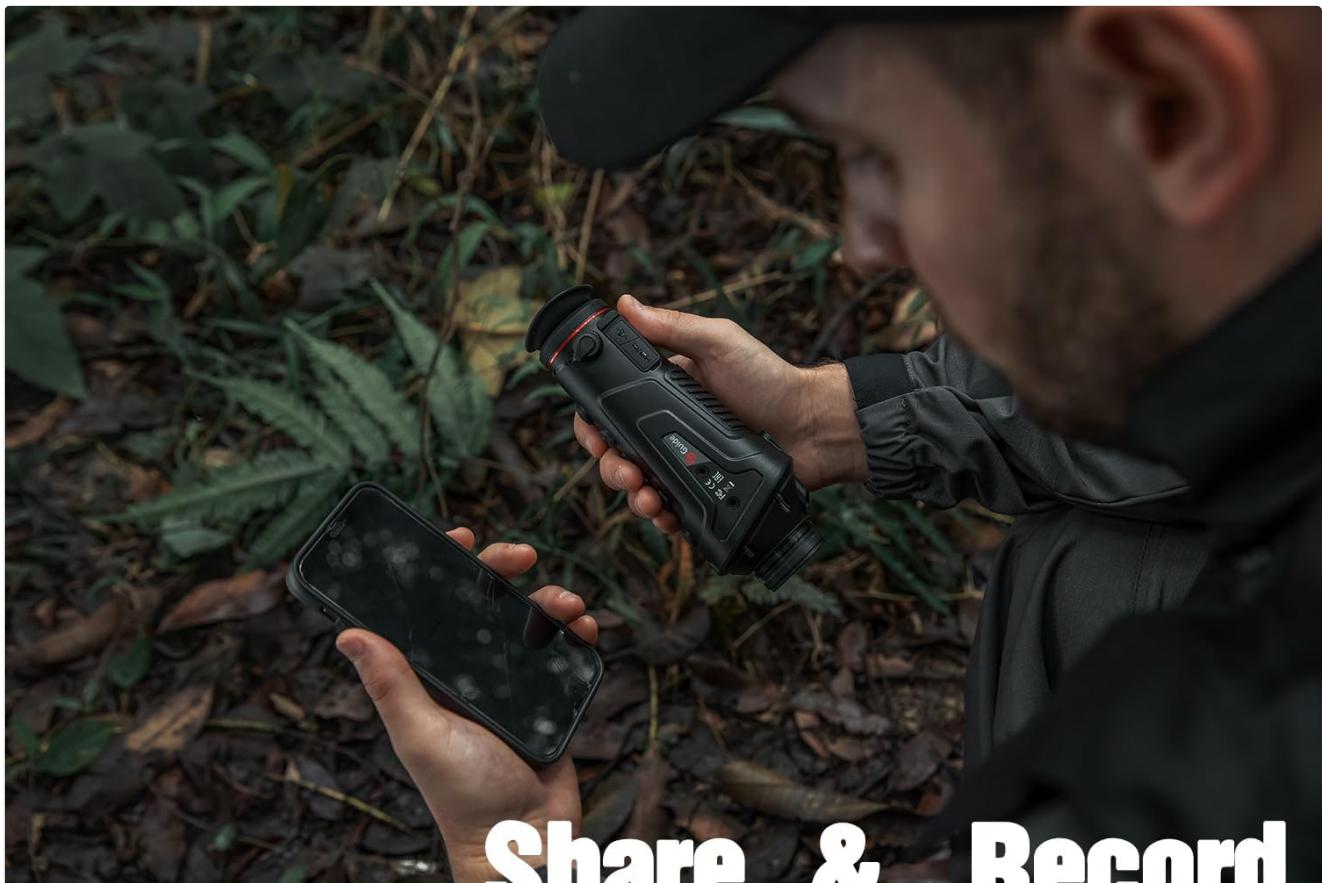
IMPORTANT SAFETY INFORMATION

- Do not expose the device to extreme temperatures or direct sunlight for prolonged periods.
- Avoid direct eye exposure to the laser beam. Do not direct the laser beam toward people or animals.
- Keep the device away from water unless specifically stated as waterproof. This model is IP66 rated, but general caution is always recommended.
- Use only the specified power adapter and cables for charging.
- Do not attempt to disassemble or repair the device yourself. Contact authorized service personnel.
- Store the device in a cool, dry place when not in use.

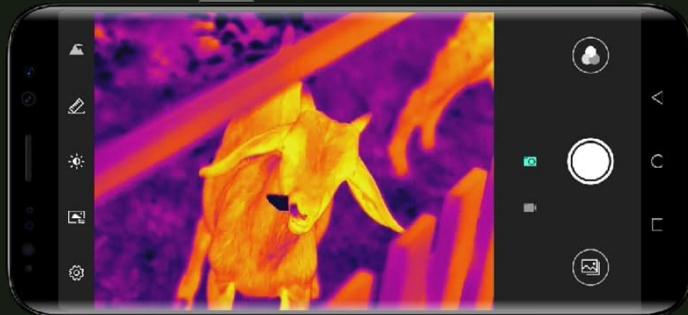
PACKAGE CONTENTS

Upon opening the package, please verify that all the following items are included:

- Thermal Monocular (TK421)
- Power adapter
- USB cable (Type C)
- Micro HDMI cable
- Lens cap
- Wrist strap
- Inner bag
- Shoulder strap
- Quick start guide



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Image: All items included in the TK421 thermal monocular package.

PRODUCT OVERVIEW

The TK421 thermal monocular is designed for ease of use and durability. Familiarize yourself with its main components:



Image: The TK421 thermal monocular, highlighting its ergonomic shape and button layout.

- **Objective Lens:** Front lens for thermal image capture.
- **Eyepiece:** Adjustable for comfortable viewing.
- **Control Buttons:** Located on the top for power, mode selection, zoom, and recording.
- **USB-C Port:** For charging and data transfer.
- **Micro HDMI Port:** For video output.
- **Strap Loops:** For attaching wrist or shoulder straps.

SETUP GUIDE

1. Charging the Device

Before first use, fully charge the TK421 monocular. The device is equipped with a durable rechargeable battery that provides up to 5 hours of continuous use.

1. Connect the provided USB Type-C cable to the monocular's charging port.
2. Connect the other end of the USB cable to the power adapter.
3. Plug the power adapter into a standard electrical outlet.
4. The charging indicator light will show the charging status. It will typically turn off or change color when fully charged.

charged.

2. Initial Power On

1. Press and hold the Power button (usually marked with a power symbol) for a few seconds until the display activates.
2. Adjust the eyepiece focus ring until the display image is clear.

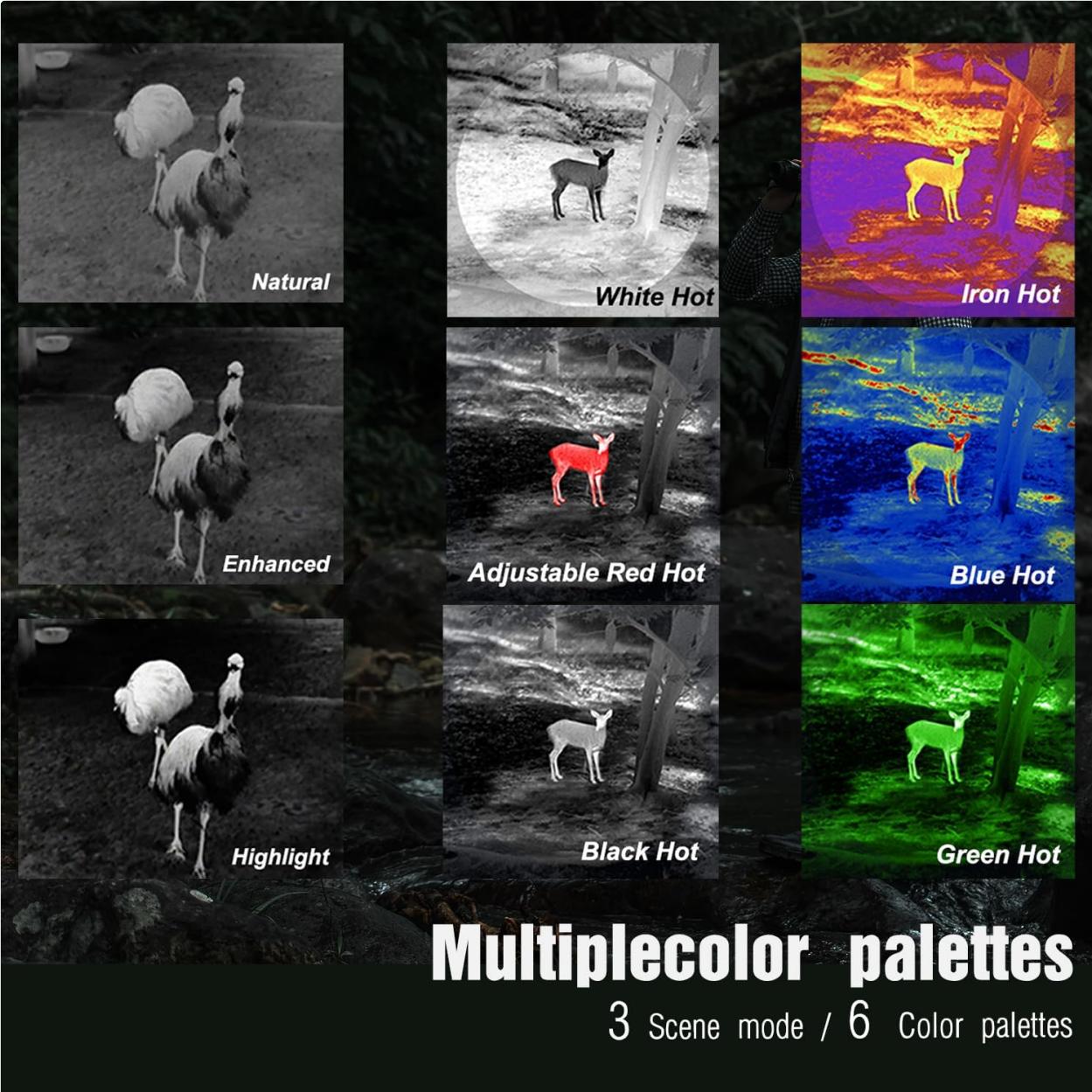
OPERATING INSTRUCTIONS

Basic Operation

- **Power On/Off:** Press and hold the Power button.
- **Zoom:** Use the dedicated zoom buttons (e.g., '+' and '-' or up/down arrows) to adjust magnification (1.7x-6.8x).
- **Mode Selection:** Press the Mode button to cycle through different viewing modes (e.g., Natural, White Hot, Iron Hot, etc.).
- **Capture Photo/Video:** Press the Capture button to take a photo or start/stop video recording. The device has 16GB of internal storage.

Advanced Features

- **Multiple Color Palettes:** The TK421 offers 6 color palettes and 3 scene modes to optimize viewing for different environments and preferences. Experiment with these settings to find the best contrast for your target.



Multiplecolor palettes

3 Scene mode / 6 Color palettes

Image: Examples of different color palettes available on the TK421 for varied thermal visualization.

- **Rangefinder and Picture-in-Picture (PIP) Mode:** Utilize the built-in rangefinder for distance estimation. The Picture-in-Picture mode allows for a magnified view of a specific area while maintaining a wider field of view.
- **Infrared Indicator:** A built-in Infrared indicator assists in easy target location, with a range of up to 200 meters.



Multi-Functional

Lighting

Laser Indicating

PIP mode

Rough ranging

Hot spot tracking

Easily Locate Targets Within 200 Meters

Stadiametric Rangefinder

2

Rabbit 5m
Boar 13m
Deer 22m

Image: Demonstrating the multi-functional capabilities including PIP mode, ranging, and hot spot tracking.

- **Wi-Fi Connectivity and TargetIR App:** Connect the monocular to your smartphone via Wi-Fi using the TargetIR app for remote control, real-time image/video transmission, and sharing.



Durable & Waterproof

suitable for all kinds of harsh weather



IP66
Waterproof



1m
Drop Test



Heat/Cold
Resistance



Humidity
10% to 95%
non-condensing



Shock
30G at 11 ms
half sine pulse



Battery Life
≥5Hours

Image: The TK421 connected to a smartphone via Wi-Fi for remote viewing and recording.

Viewing Thermal Imagery



Clearer Visuals

 Upgrade Infrared Sensor
400×300@17µm Resolution

 High-Definition LCOS Display
0.4 inch 1280×960 Full Color



The image shows a visual comparison of thermal imaging. On the left, a 'Before' image is a grainy, low-contrast black and white thermal scan showing two small, dark figures in a field. On the right, an 'After' image is a clear, high-contrast color thermal scan showing the same two figures in a more detailed and vibrant way, with colors ranging from dark blues to bright yellows and reds.

Image: A visual comparison illustrating the enhanced clarity provided by the TK421's thermal imaging capabilities.

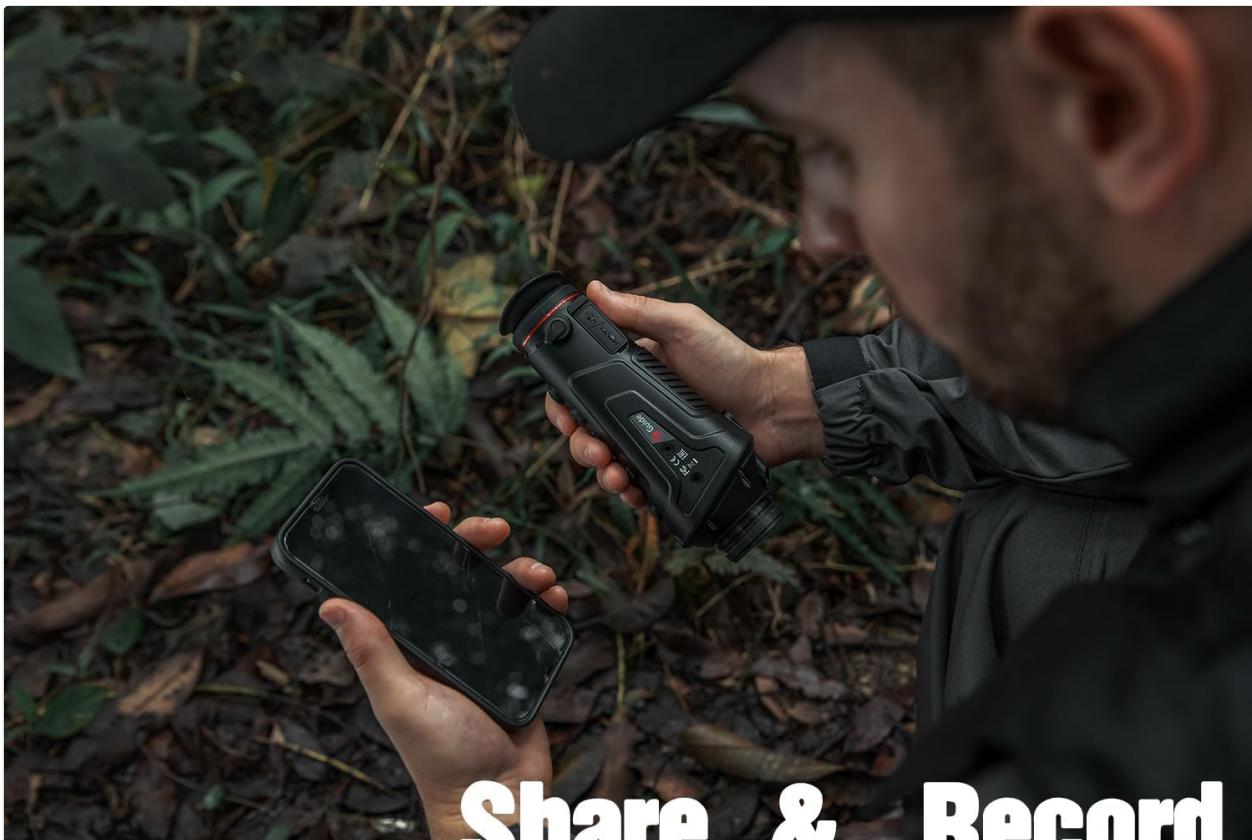
Official Product Video

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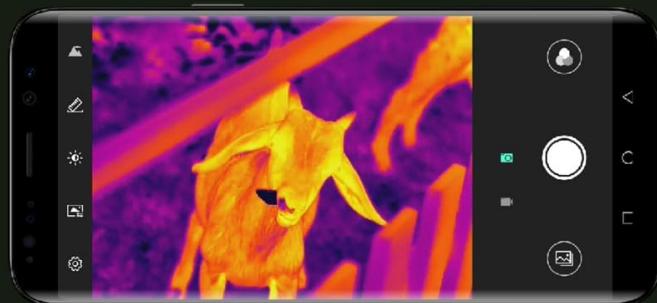
Video: A demonstration of the TK421 thermal monocular in use, showing real-time field observation of wildlife. This video illustrates the device's ability to provide clear thermal imagery for identifying subjects in various environments.

MAINTENANCE

- Cleaning the Lens:** Use a soft, lint-free cloth specifically designed for optics to clean the objective lens and eyepiece. Do not use abrasive materials or harsh chemicals.
- Cleaning the Body:** Wipe the device body with a soft, damp cloth. Avoid excessive moisture.
- Storage:** When not in use for extended periods, store the monocular in its protective bag in a dry, cool environment. Ensure the battery is partially charged (around 50%) before long-term storage.
- Durability:** The TK421 features an IP66 waterproof rating and is designed to withstand drops of up to 1 meter, making it suitable for harsh weather conditions.



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Image: Highlighting the durable and waterproof features of the TK421 monocular.

TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Battery is depleted.	Charge the device using the provided power adapter and USB-C cable.
Image is blurry or unclear.	Eyepiece not focused; lens is dirty.	Adjust the eyepiece focus ring. Clean the objective lens and eyepiece with a soft, lint-free cloth.
Cannot connect to TargetIR app.	Wi-Fi is off; incorrect app settings.	Ensure Wi-Fi is enabled on the monocular and your smartphone. Check app permissions and network settings. Restart both devices.

Problem	Possible Cause	Solution
Short battery life.	Frequent use of power-intensive features; old battery.	Reduce screen brightness or turn off Wi-Fi when not needed. Ensure the device is fully charged before use. If battery life significantly degrades, contact support.

TECHNICAL SPECIFICATIONS

Feature	Detail
Model Name	Guide Sensmart-TK 421
Sensor Resolution	400x300 pixels
Pixel Pitch	17 µm
Refresh Rate	50Hz
Zoom Range	1.7x-6.8x
Display Type	0.4-inch FLOCS screen
Display Resolution	1280x960
Internal Storage	16GB
Battery Life	Up to 5 hours
Waterproof Rating	IP66
Drop Resistance	Up to 1 meter
Connectivity	Wi-Fi, USB Type-C, Micro HDMI
Material	Metal, Plastic
Item Weight	1 Pound
Dimensions (LxWxH)	14.17 x 4.72 x 7.09 inches (Product)

WARRANTY AND SUPPORT

The Guide Sensmart TK421 Thermal Vision Monocular comes with a **three-year warranty**, providing peace of mind and protection for your investment.

For technical support, warranty claims, or any inquiries regarding your device, please contact Guide Sensmart customer service. Refer to the quick start guide included in your package for specific contact details or visit the official Guide Sensmart website.

Online Resources:

- Visit the [Guide Sensmart Store on Amazon](#) for product information and updates.



[pdf] Guide Catalog

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Physical Weight Size L W H Standard **TK421** TK431 TK451 TK611 TK621 TK631 400 300, 17 m VOx 8 to 14 m 30mk F1 25 640 480, 12 m...

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