



TL Lion Series

Multispectral Fusion Thermal Monocular

Triple Light, Total Insight



1 Introduction

2 Features

3 Specifications

4 Applications

CONTENT

A man wearing a camouflage jacket and a wide-brimmed hat is looking through a camera in a forest. The background is filled with green foliage and tree branches. A semi-transparent circular graphic is overlaid on the right side of the image, containing the word 'CONTENT' in white capital letters.

TL Series

Multispectral Fusion Thermal Monocular



Thermal

Quick Search

L R F

Target Positioning

Digital

Law Enforcement Records

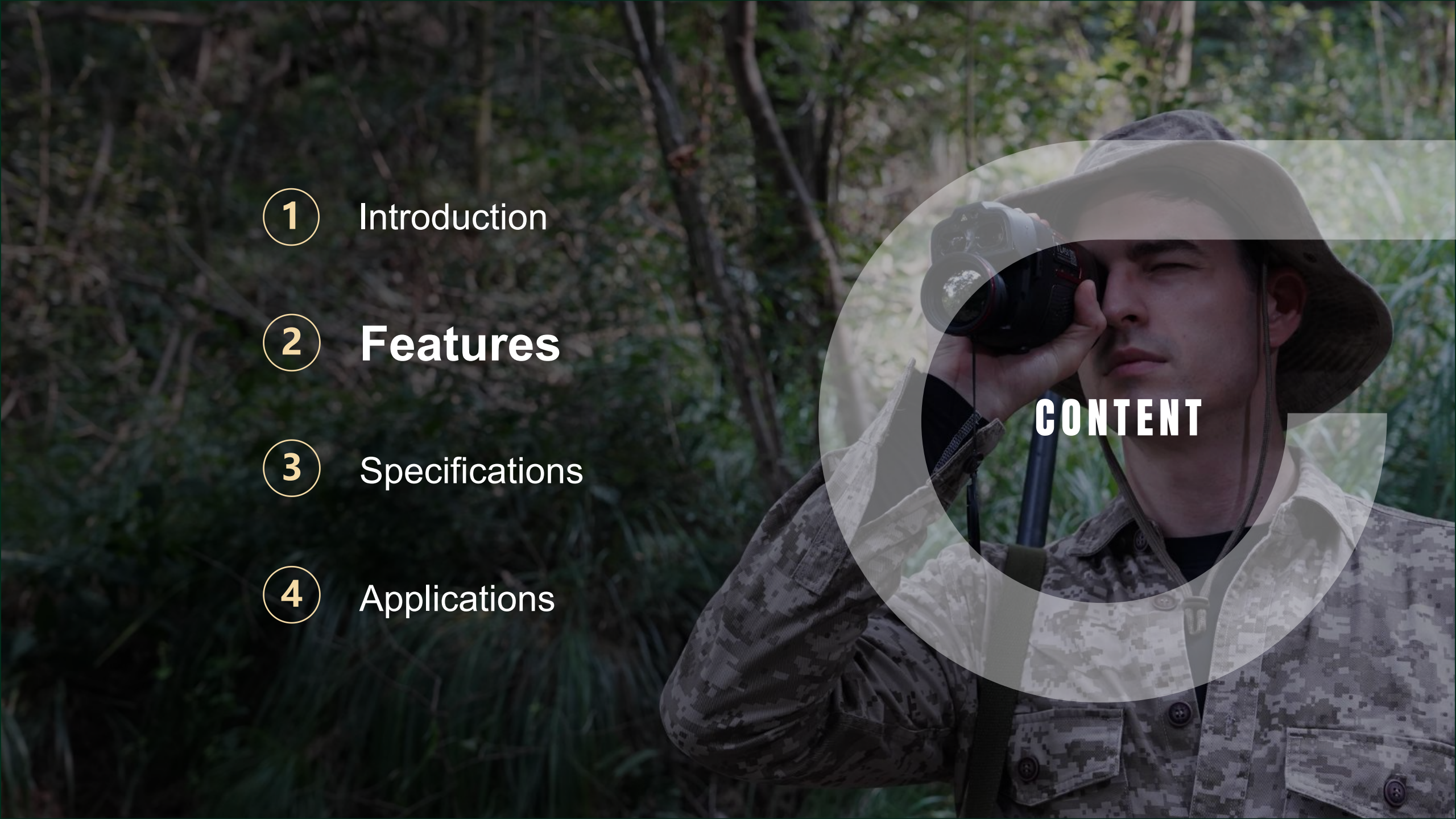
Introduction



The **TL Series** is the first multispectral fusion thermal monocular of Guide Sensmart whose all-in-one design meets the needs of all-day and all-weather observation. Equipped with a 12 μ m high-end thermal sensor, 1920 \times 1080 CMOS sensor and 1920 \times 1080 AMOLED display, the TL Series offers significantly sharp and richly contrasted images with an integrated laser rangefinder with up to 600m accurate ranging. Integrated with a built-in GPS, laser rangefinder, and gyroscope, target latitude and longitude, target distance, and device angle information can be obtained for quick aiming.

Component Illustration



- 
- A man wearing a camouflage jacket and a wide-brimmed hat is looking through a camera in a forest. The background is filled with green foliage and tree branches. A semi-transparent circular graphic is overlaid on the right side of the image, containing the word 'CONTENT' in white capital letters.
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Thermal + Digital





Thermal Sensor

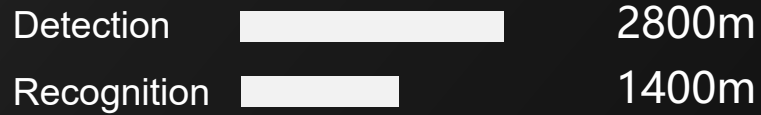
400×300@
640×480@ **12μm**

Aim farther and see better

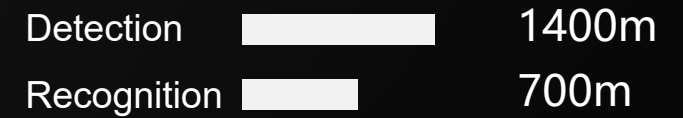
Range performances



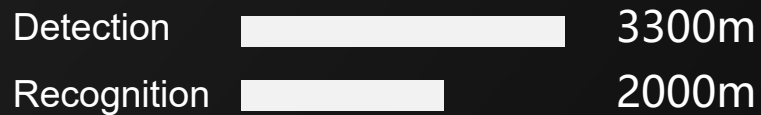
35mm



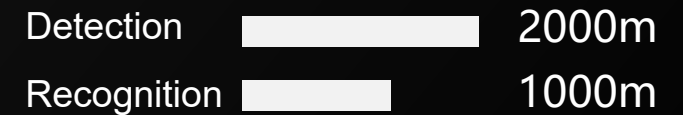
35mm



50mm



50mm





CMOS Sensor

1920 × 1080
@4μm

Clear full-color images

The moonlight-grade CMOS sensor can still capture clear full-color images under low lighting conditions (minimum 0.001 lux).



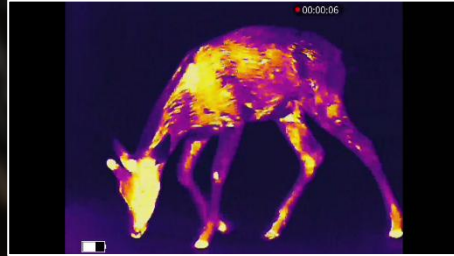
Scene Fusion





Five Scene Modes

2 Single-optical Modes



Thermal

White Hot / Black Hot / Red Hot
/ Iron Red / Blue Hot



Digital

Daytime / Nighttime / Low-light

3 Fusion Modes



Fusion1

IR+Visible light
Transparency Overlay



Fusion2

Visible light stroke+IR
Line Overlay



Fusion3

IR stroke+Visible light
Regional Transparency Overlay

Comprehensively

Detailed

Fast

All-weather Target Search



Thermal

- White Hot
- Black Hot
- Red Hot
- Iron Red
- Blue Hot



Press Up to switch



Case in Point



Digital

- Daytime
- Nighttime
- Low-light



Press Up to switch



Site Restoration + Visible Target



Fusion 1



Press Up to switch



Enhanced Details + Target Highlighting



Fusion 2



Press Up to switch



Homage to the Classics + Customization



Fusion 3



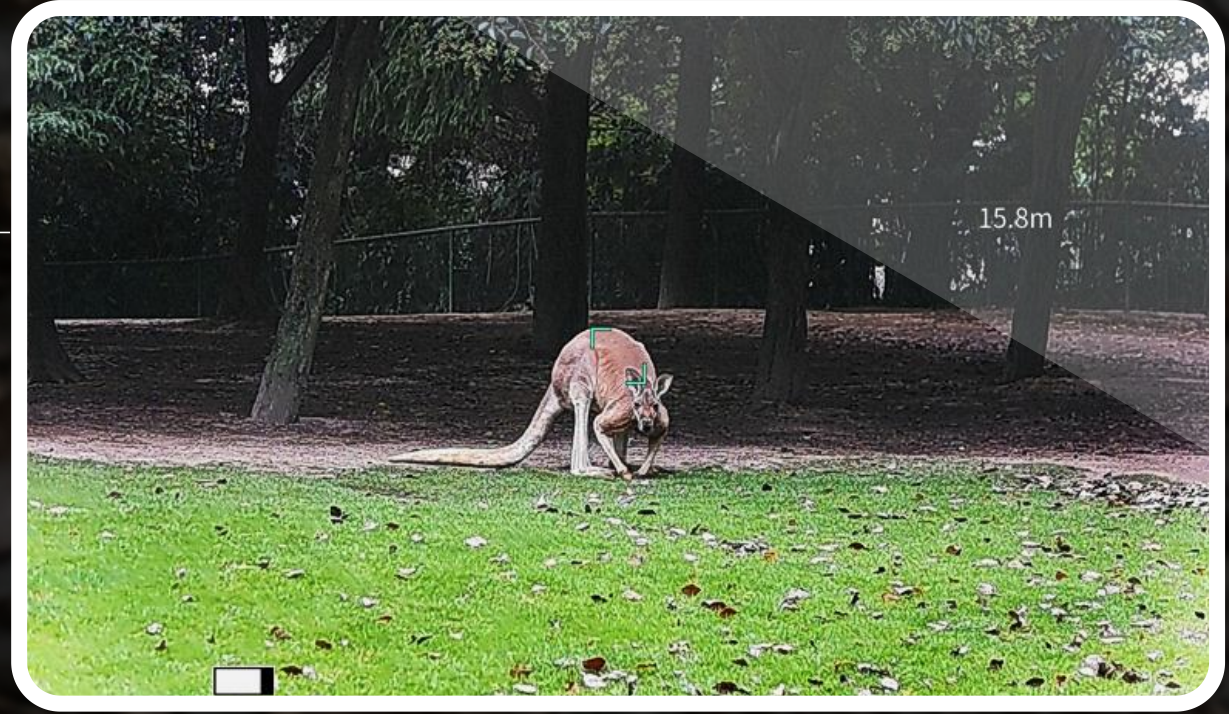
Press Up to switch





High-definition Display





FULL HD

AMOLED

1920×1080



Screen Recording

FULL HD

AMOLED



0.39-inch OLED display provides with excellent viewing experience



VIDEO



Screen recording to record the whole operation process for sharing



Target Positioning





Laser Rangefinder

600m

- Laser wavelength: 905nm Class I
- Detection range: 5-600m



Built-in laser rangefinder

for the precise distance information of targets without calibration



Target Positioning

Thermal Sensor

Target search / Target monitoring



Built-in GPS

Device location information



Built-in LRF

Target distance information



Built-in Compass

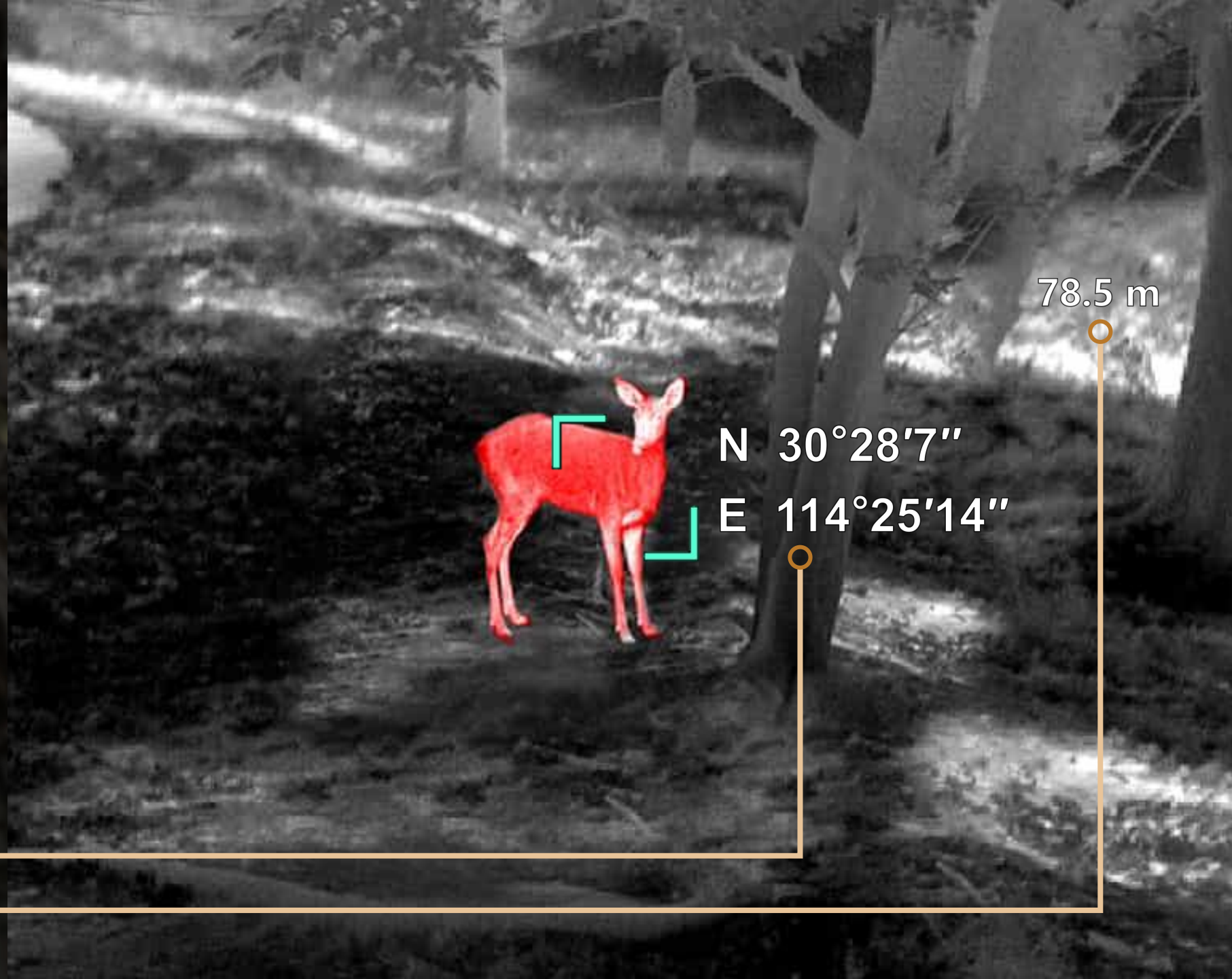
Device orientation information



Four-Dimensional Perception

Latitude and longitude

Distance



Target Positioning



Target —
Distance
Latitude and longitude

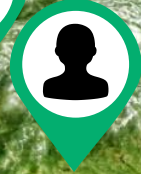
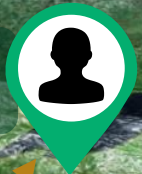
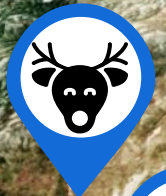
GPS

Compass

LRF

LRF

GPS





Safe and Reliable





5h Long Battery Life





Cold-resistant



Working
temperature-
30°C~50°C

Excellent Quality

UK CA IP6 RoHS 
CE  FC EAC

Rugged and Durable

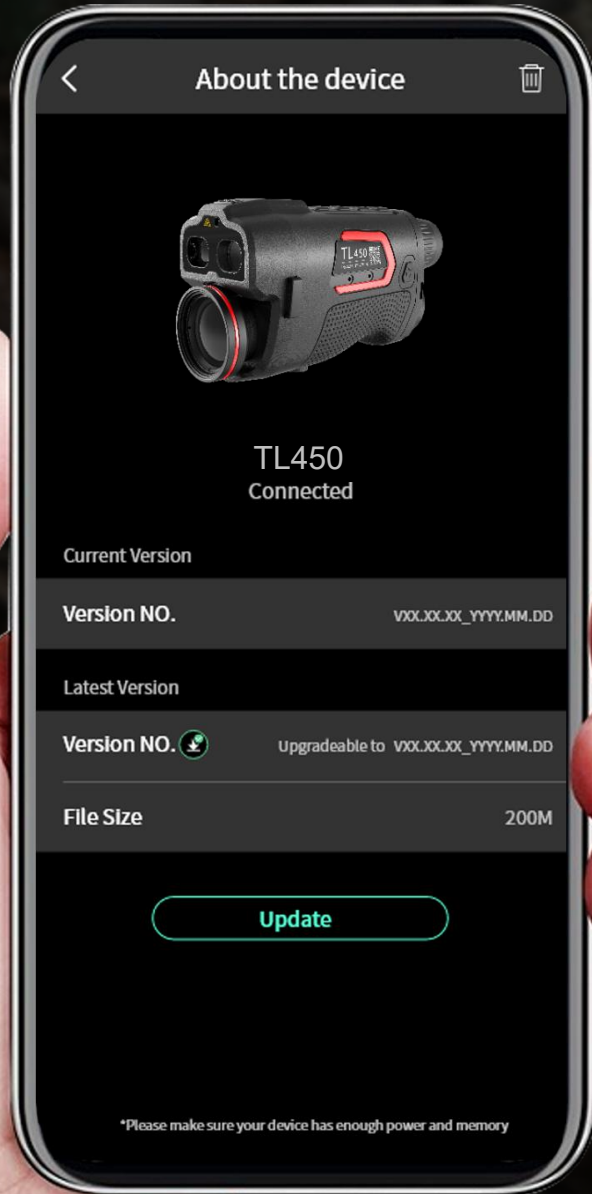


Protection rating
IP67



Remote Upgrade





OTA Upgrade

Connect to the APP (Android or iOS) for
OTA upgrade, quick and convenient



Target IR

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Specifications



Product model	TL430	TL450	TL630	TL650
Thermal				
Type	Uncooled VOx Infrared Detector, 8 to 14 μm			
Resolution	400×300, 12μm		640×480, 12μm	
Focal length	35mm, F1.0	50mm, F1.2	35mm, F1.0	50mm, F1.2
Field of view	7.8°×5.9°	5.5°×4.1°	12.4°×9.3°	8.7°×6.6°
Optical zoom	2.3x	3.3x	1.5x	2.0x
Digital				
Type	CMOS			
Resolution	1920×1080, 4μm			
Focal length	22mm, F1.5		17mm, F1.4	
Other				
Display	0.39" AMOLED, 1920×1080			
Eyepiece	Exit pupil distance≥15 mm; Diopter: -4 to +4; Zoom: 13.8x			
Laser rangefinder	Max. measuring range: 600m			
Image modes	IR, Visible, Fusion 1, Fusion 2, Fusion 3			
Scene modes	IR: Enhanced, Highlight and Natural; Visible: Day, Night and Low-light			
Operating time	≥ 5 hours (Single, replaceable 18650 battery)			
USB	USB Type-C			
Memory capacity	64 GB			
Operating temperature	-20 °C to 50 °C			
Encapsulation	IP67			
Certification	IP67, FCC, CE, RoHS, EAC, WEEE, un38.3, IEC 60825-1 Class 2			
Weight	≤530g	≤567g	≤530g	≤567g
Size	170×70×90mm	190×70×90mm	180×70×90mm	190×70×90mm
Detection range	1000m	1400m	1000m	1400m

Standard Configuration



5V2A adapter (US, UK, Australia and Europe)



Type C cable x1



18650 x1



Battery charger



Wrist strap



Lens cover and lanyard



Quick start guide



Warranty card

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- ④ **Applications**



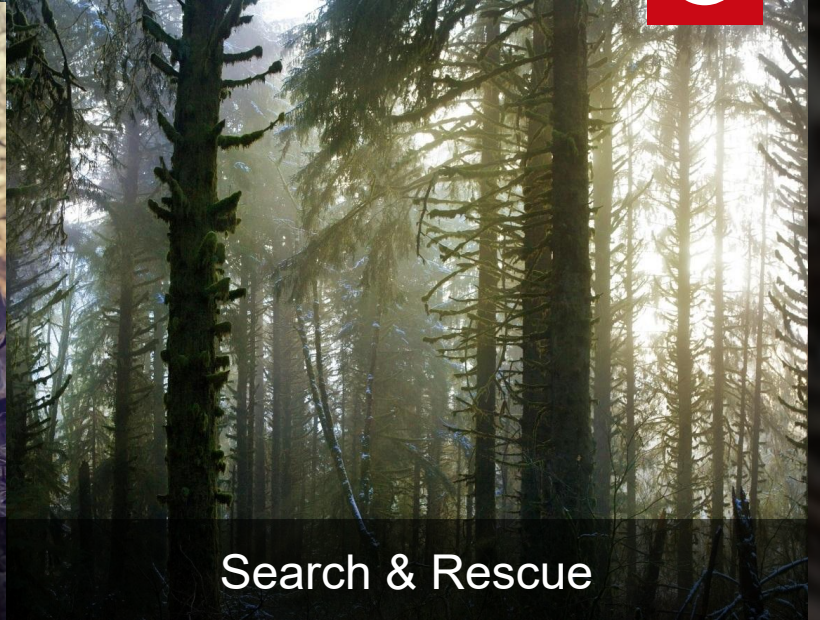
CONTENT



Outdoor



Hunting



Search & Rescue



Livestock Breeding



Personal Security





Law Enforcement

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