

# TN Normae Series

Handheld Thermal  
Imaging Binoculars

Fearless the darkness, All in your eyes



## Introduce

TN Normae Series follows classic binocular design, greatly reducing the fatigue feeling of long-time observation. It adopts high-sensitivity VOx uncooled IR detector, bring you high quality imaging and immersive observation experience with full color OLED 1024×768 high-definition display. A variety of functions to meet all your needs, such as taking photos, videos, WIFI, laser ranging, GPS, compass, etc.

## Features and Benefits

- IR resolution up to 640 × 480, Superior image quality
- Quick location, laser ranger finder with 600m accuracy
- Full color OLED 1024×768 high-definition display, easy observation
- Adjustable interpupillary distance between 60mm~70mm
- Well-designed PIP mode, highlighting the target
- Realize live image and remote control via WIFI connection



## Application

- Night hunting
- Law enforcement
- Search & Rescue
- Personal security

## Specifications

Model	TN430	TN450	TN630	TN650
<b>Infrared Detector</b>				
Detector type	VOx			
Detector resolution and pitch	400 × 300, 17 μm		640 × 480, 12 μm	
Spectral range	8 to 14 μm			
NETD	≤30mk			
Frame rate	50 Hz			
<b>Lens</b>				
Focal length	35 mm; F1.2	50 mm; F1.2	35 mm; F1	50 mm; F1.2
Focus	Manual			
Field of view	11.1° × 8.33°	7.78° × 5.84°	12.52° × 9.41°	8.78° × 6.59°
Optical zoom	2.3x	3.2x	2.0x	2.8x
Digital zoom	1 – 4x		1 – 8x	
<b>Power</b>				
Battery type	2 replaceable 18650 batteries			
Battery life	≥ 5.5 hours			
<b>Interface</b>				
USB	Type C (USB 2.0 standard), supporting power supply and data access			
Video interface	micro HDMI			
External expansion	External Display and Bluetooth remote control			
Mechanical interface	UNC ¼"-20 (Tripod mounting, L-bracket is required), Mechanical expansion interface			
<b>Display</b>				
Display type	0.39" OLED × 2			
Resolution	1024 × 768			
Eyepiece	Binoculars, exit pupil distance ≥ 16 mm, diopter adjustment: -4 to +2			
Eyepiece zoom	13.8x			
Video output	Digital video			
<b>Functions</b>				
PIP	Upper left, Upper middle, Upper right, Closed			
Smooth zoom	Available			
Image enhancement	Available			
Scene modes	Enhanced, Highlight and Natural			
Image capturing	Available			
Video recording	Available			
WIFI	Transmission of real-time video via WIFI for remote control in the 2.4G frequency band and within 15 meters			
Color palettes	Black Hot, White Hot, Adjustable Red Hot, Iron Red, Blue Hot, Green Hot			
Hot spot tracking	Available			
Compensation modes	Automatic, shutter and scene compensation			
Rough ranging	Available			
Laser	Laser rangefinder (up to 600 m)			
Other	GPS, Compass, Gyroscope, Bluetooth			
<b>System</b>				
Language settings	Chinese / English / Russian / German / French			
Start up	2 s			
Memory capacity	16 GB			
<b>Environmental</b>				
Operating temperature range	-30 °C to 50 °C			
Storage temperature range	-40 °C to 60 °C			
Humidity	10 % to 95 % non-condensing			
Shock	30 G at 11 ms half sine pulse (as per IEC60068-2-27)			
Vibration	10 Hz - 150 Hz - 10 Hz 0.15 mm (as per IEC60068-2-6)			
Drop	1 m			
Encapsulation	IP66			
Certification	IP66, FCC, CE, RoHS, EAC, un38.3			
<b>Physical</b>				
Weight	≤860 g	≤880 g	≤860 g	≤880 g
Size (L × W × H)	162 × 146 × 70 mm			
Standard	Power adapter (in compliance with FCC, CE, EAC, and ROHS), Type C cable, Micro HDMI cable, lens cap, shoulder strap, 2 detachable eye masks, carry bag, 2 replaceable 18650 batteries (UN38.3), quick start guide			
Optional	Extended bracket, Bluetooth remote control			

# Specifications

