

# GUIDE

## Fearless the darkness, All in your eyes

**TN Series**

Handheld Thermal  
Imaging Binoculars

### Introduction

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 AMOLED 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

- IR resolution up to 640 × 480, Superior image quality
- Quick location, laser ranger finder with 1000m/1500m accuracy
- Full color AMOLED 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

### Applications

- Night Hunting
- Law Enforcement
- Search & Rescue
- Personal security



## Specifications

| Product model        | TN430                                                                                                                                                                                                                        | TN450        | TN630        | TN650        |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|--------------|
| <b>Sensor</b>        |                                                                                                                                                                                                                              |              |              |              |
| Type                 | Uncooled VOx Infrared Detector, 8 to 14μm                                                                                                                                                                                    |              |              |              |
| Resolution           | 400×300@17μm                                                                                                                                                                                                                 |              | 640×480@12μm |              |
| NETD                 | 30mK                                                                                                                                                                                                                         |              |              |              |
| Frame rate           | 50Hz                                                                                                                                                                                                                         |              |              |              |
| <b>Lens</b>          |                                                                                                                                                                                                                              |              |              |              |
| Objective lens       | 35mm, F1.2                                                                                                                                                                                                                   | 50mm, F1.2   | 35mm, F1.2   | 50mm, F1.2   |
| Field of view        | 11.1°×8.33°                                                                                                                                                                                                                  | 7.78°×5.84°  | 12.52°×9.41° | 8.78°×6.59°  |
| FOV m@100m           | 19×15                                                                                                                                                                                                                        | 14×10        | 22×16        | 15×12        |
| Magnification        | 2.3x~9.2x                                                                                                                                                                                                                    | 3.2x~12.8x   | 2.0x~16.0x   | 2.8x~22.4x   |
| Detection range      | 1300m/1400yd                                                                                                                                                                                                                 | 1800m/1950yd |              | 2600m/2800yd |
| <b>Display</b>       |                                                                                                                                                                                                                              |              |              |              |
| Display type         | 0.39" AMOLED 1024×768                                                                                                                                                                                                        |              |              |              |
| Color palettes       | Black Hot, White Hot, Adjustable Red Hot, Iron Red, Blue Hot, Green Hot                                                                                                                                                      |              |              |              |
| Eyepiece             | Exit pupil distance 16 mm; Diopter: -6 to +6; Interpupillary distance adjustment: 60mm to 70mm; Zoom: 13.8x                                                                                                                  |              |              |              |
| <b>Hardware</b>      |                                                                                                                                                                                                                              |              |              |              |
| Laser rangefinder    | 1000m/1090yd                                                                                                                                                                                                                 |              | 1500m/1630yd |              |
| WIFI                 | 2.4G                                                                                                                                                                                                                         |              |              |              |
| Interface            | USB Type-C; Micro HDMI                                                                                                                                                                                                       |              |              |              |
| Others               | GPS, Compass, Gyroscope, Bluetooth                                                                                                                                                                                           |              |              |              |
| <b>System</b>        |                                                                                                                                                                                                                              |              |              |              |
| Recording function   | Photo/Video                                                                                                                                                                                                                  |              |              |              |
| Memory capacity      | 16GB                                                                                                                                                                                                                         |              |              |              |
| <b>Power</b>         |                                                                                                                                                                                                                              |              |              |              |
| Battery type         | 2 replaceable 18650 batteries                                                                                                                                                                                                |              |              |              |
| Operating time       | 5.5 hours                                                                                                                                                                                                                    |              |              |              |
| <b>Environmental</b> |                                                                                                                                                                                                                              |              |              |              |
| Operating temp.      | -30 °C to 50 °C / -22°F to +122°F                                                                                                                                                                                            |              |              |              |
| Encapsulation        | IP66                                                                                                                                                                                                                         |              |              |              |
| <b>Physical</b>      |                                                                                                                                                                                                                              |              |              |              |
| Weight(g/oz)         | 860/30.34                                                                                                                                                                                                                    | 880/31.04    | 860/30.34    | 880/31.04    |
| Size(mm/in)          | 162×146×70/6.38×5.75×2.76                                                                                                                                                                                                    |              |              |              |
| Standard             | Device, lens cap, 2 detachable eye masks, carry bag, shoulder strap, 5V2A adapter (US, Britain, Australia and Europe), 2 replaceable 18650 batteries, Battery charger, USB Type-C cable, micro HDMI cable, quick start guide |              |              |              |
| Optional             | Extended bracket, Bluetooth remote control                                                                                                                                                                                   |              |              |              |

\* Product performance is based on testing in a controlled laboratory environment. Your test results may vary due to several external and environmental factors. All specifications are subject to the actual product. The manufacturer reserves the right to modify technical specifications without notice or liability to you.