

# TR series

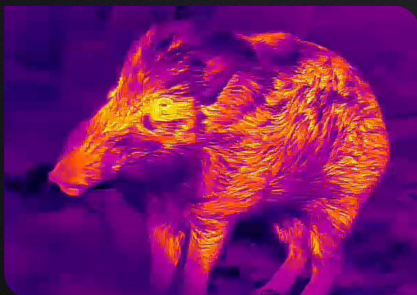
Thermal Imaging  
Riflescope

Enduring Performance, Day and Night



## Introduction

TR Series is an economical civilian infrared thermal imaging riflescope that adopts high sensitivity thermal detector with three different lens options of 25 mm, 35 mm, 50 mm. The TR Series offers sharp and detailed images while retaining the accuracy. TR thermal riflescope also features with compact size, waterproof and dustproof, high shock resistance, rugged and durable, which performs impressively in any harsh weather.



## Features and Benefits

- Fast and easy replaceable 18650 battery for 8 hours of operation
- 1024x768 resolution HD OLED display for image detail
- Support photo and video, record wonderful moments at any time, easy to share
- Screen freezing for quick and easy zeroing
- Support device firmware updates by connecting TargetIR APP
- Get precise 600m laser ranging using an external range finder
- A wide range of operating temperatures (-30°C to 50°C)
- IP 67 dustproof and waterproof rated

## Applications

- Outdoor Observing
- Law Enforcement



## Specifications

| Product model         | TR420                                                                                                                                               | TR430            | TR450            | TR620            | TR630            | TR650            |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|------------------|------------------|------------------|
| Infrared detector     |                                                                                                                                                     |                  |                  |                  |                  |                  |
| Detector type         | VOx, 8 to 14 μm                                                                                                                                     |                  |                  |                  |                  |                  |
| Detector resolution   | 384 × 288, 12 μm                                                                                                                                    |                  |                  | 640 × 480, 12 μm |                  |                  |
| NETD                  | ≤30 mk                                                                                                                                              |                  |                  |                  |                  |                  |
| Frame rate            | 50 Hz                                                                                                                                               |                  |                  |                  |                  |                  |
| Lens                  |                                                                                                                                                     |                  |                  |                  |                  |                  |
| Focal length          | 25 mm; F1.0                                                                                                                                         | 35 mm; F1.0      | 50 mm; F1.0      | 25 mm; F1.0      | 35 mm; F1.0      | 50 mm; F1.0      |
| Field of angle        | 10.44° × 7.87°                                                                                                                                      | 7.50° × 5.64°    | 5.27° × 3.95°    | 17.08° × 13.03°  | 12.38° × 9.38°   | 8.73° × 6.60°    |
| Optical zoom          | 2.4x                                                                                                                                                | 3.3x             | 4.7x             | 1.4x             | 2.0x             | 2.8x             |
| Digital zoom          | 1x ~ 4x                                                                                                                                             |                  |                  | 1x ~ 8x          |                  |                  |
| Focus                 | Manual                                                                                                                                              |                  |                  |                  |                  |                  |
| Power                 |                                                                                                                                                     |                  |                  |                  |                  |                  |
| Battery type          | Single, replaceable 18650 battery                                                                                                                   |                  |                  |                  |                  |                  |
| Battery life          | ≥ 8 hours                                                                                                                                           |                  |                  |                  |                  |                  |
| Interface             |                                                                                                                                                     |                  |                  |                  |                  |                  |
| USB                   | Type C USB 2.0 for power supply, data transfer, analog video output                                                                                 |                  |                  |                  |                  |                  |
| Mechanical interface  | Picatinny                                                                                                                                           |                  |                  |                  |                  |                  |
| Display               |                                                                                                                                                     |                  |                  |                  |                  |                  |
| Display type          | 0.39" OLED                                                                                                                                          |                  |                  |                  |                  |                  |
| Resolution            | 1024 × 768                                                                                                                                          |                  |                  |                  |                  |                  |
| Eyepiece              | Exit pupil distance ≥ 48 mm, Diopter ± 4                                                                                                            |                  |                  |                  |                  |                  |
| Eyepiece zoom         | 14x                                                                                                                                                 |                  |                  |                  |                  |                  |
| Video output          | Analog video                                                                                                                                        |                  |                  |                  |                  |                  |
| Functions             |                                                                                                                                                     |                  |                  |                  |                  |                  |
| Recording function    | Photo/Video                                                                                                                                         |                  |                  |                  |                  |                  |
| Hot spot tracking     | Available                                                                                                                                           |                  |                  |                  |                  |                  |
| Rough ranging         | Available                                                                                                                                           |                  |                  |                  |                  |                  |
| PIP                   | Upper left, Upper middle, Upper right, Closed, PIP with division line                                                                               |                  |                  |                  |                  |                  |
| Scene modes           | Enhanced, Highlight and Natural                                                                                                                     |                  |                  |                  |                  |                  |
| Color palettes        | White Hot, Black Hot, Red Hot, Green Hot, Iron Red, Blue Hot                                                                                        |                  |                  |                  |                  |                  |
| Compensation modes    | Shutter and scene compensation                                                                                                                      |                  |                  |                  |                  |                  |
| WIFI                  | Transmission of real-time video via WIFI for remote control in the 2.4G frequency band and within 15 meters                                         |                  |                  |                  |                  |                  |
| Zero calibration      | 50 m / 100 m / 200 m / 300 m / 500 m                                                                                                                |                  |                  |                  |                  |                  |
| Line type             | 10 types                                                                                                                                            |                  |                  |                  |                  |                  |
| Other                 | OTA update                                                                                                                                          |                  |                  |                  |                  |                  |
| System                |                                                                                                                                                     |                  |                  |                  |                  |                  |
| Language settings     | English / Russian / German / French / Italian / Spanish / Japanese / Korean                                                                         |                  |                  |                  |                  |                  |
| Memory capacity       | 32GB                                                                                                                                                |                  |                  |                  |                  |                  |
| Environmental         |                                                                                                                                                     |                  |                  |                  |                  |                  |
| Operating temperature | -30°C to 50°C                                                                                                                                       |                  |                  |                  |                  |                  |
| Storage temperature   | -45°C to 70°C                                                                                                                                       |                  |                  |                  |                  |                  |
| Humidity              | 10 % to 95 % non-condensing                                                                                                                         |                  |                  |                  |                  |                  |
| Shock                 | 800 G at 1 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                  | 1m                                                                                                                                                  |                  |                  |                  |                  |                  |
| Encapsulation         | IP67                                                                                                                                                |                  |                  |                  |                  |                  |
| Certification         | IP67, FCC, CE, RoHS, EAC, WEEE, UKCA, un38.3                                                                                                        |                  |                  |                  |                  |                  |
| Detection range       |                                                                                                                                                     |                  |                  |                  |                  |                  |
| Detection range       | 1000 m                                                                                                                                              | 1400 m           | 2000 m           | 1000 m           | 1400 m           | 2000 m           |
| Physical              |                                                                                                                                                     |                  |                  |                  |                  |                  |
| Weight                | ≤540 g                                                                                                                                              |                  | ≤590 g           | ≤540 g           |                  | ≤590 g           |
| Size (L × W × H)      | 202 × 88 × 66 mm                                                                                                                                    | 208 × 88 × 66 mm | 219 × 88 × 66 mm | 202 × 88 × 66 mm | 208 × 88 × 66 mm | 219 × 88 × 66 mm |
| Standard              | Type C cable, 5V2A adapter (US, Britain, Australia and Europe),18650 battery, Battery charger, lens cap, eye mask, quick start guide, warranty card |                  |                  |                  |                  |                  |
| Optional              | 18650 battery, Dovetail guide, Bluetooth remote control, Laser rangefinder                                                                          |                  |                  |                  |                  |                  |