MULTI-PURPOSE THERMAL MONOCULAR / PRODUCT BRIEF

Multi-Purpose Thermal Monocular

HANDHELD • HELMET • FRONT-MOUNTED

640-class thermal imaging | three configurations





Observation and targeting in one device, with zero dependence on visible light

A compact thermal monocular switching between **handheld, helmet-mounted and front-mounted weapon** use. 640×512 detector, 1024×768 display, 6 image polarities, 1×/2×/4× zoom, photo/video capture, Wi-Fi video transmission, electronic compass, angle sensor, reticle zeroing, picture-in-picture and image enhancement.

640×512	≥6h	350g
Thermal detector	Continuous operation	Unit weight

6	1/2/4×	8
Image polarities	Digital zoom	Zeroing reticles

01 Three Configurations

Handheld Observation

Portable search; long-press left key to record, short-press to capture.

Helmet-Mounted

Helmet flip-up mount frees both hands; dedicated menu.

Front-Mounted / Weapon Sight

Picatinny rail, 8 reticles, 5 colours, X/Y zeroing and PiP.

02 Operating Environment

- Covert observation and heat-source detection without visible light
- Law-enforcement patrol, crime-scene investigation, search and rescue, field operations
- Diopter adjustment covers myopia 400° to hyperopia 400°; focus range 1 m to ∞
- Storage temperature −25 °C to +65 °C; ≥6 h continuous operation (25 °C ±5 °C, Wi-Fi on)
- Do not aim directly at intense heat sources such as the sun, lasers or welding arcs
- Keep away from dust and moisture; avoid impact, dropping and vibration

Technical Specifications

Parameter	Value
Detector	640×512, 8–14 µm
Display	1024×768, 7.8 µm
Power supply	18650 battery
Continuous operation	≥6 h (25 °C ±5 °C) (Wi-Fi on)
Data interface	USB Type-C; mass storage & firmware upgrade
Mechanical interface	Picatinny rail; helmet flip-up mount
Storage temperature	−25 °C to +65 °C
Weight	350 g (excluding battery and mount base)
Dimensions	120 mm × 70 mm × 50 mm (L × W × H)

03 Imaging & Control

- **6 image polarities**: green hot, outline, white hot, black hot, red hot, fusion
- **Digital zoom**: 1× / 2× / 4×; picture-in-picture (2× enlargement of the reticle-centre area)
- **Image adjustment**: brightness, contrast, image enhancement and screen brightness each 1–10 levels; outline strength 1–10
- **Calibration**: background (lens cap on, 3-second countdown), shutter calibration, display alignment
- **Reticle & zeroing**: 8 reticle types, 0–5 brightness levels, 5 colours, X/Y zeroing, frozen frame

04 Capture • Transmission • System

- **Photo / video**: short-press to capture, long-press to record; 5-minute maximum per clip with automatic segmentation; internal storage
- **Wi-Fi transmission**: hotspot rtsp-icam; live view via RTSP stream on a mobile device
- **Sensors**: built-in electronic compass and angle sensor; compass can be hidden
- **System**: EN/CN bilingual, time setting, device info, status-bar hide, factory reset, Type-C upgrade, format
- **Buttons**: power / right, left / photo / video, menu / confirm, FIRE (laser illuminator)



Top view · original



Front view · objective lens



Rear view · eyepiece

Handling & Maintenance

Install the battery in the orientation marked inside the compartment and power the unit off before removing the battery. Do not disassemble, drop or short-circuit the battery. Never touch the optical lens surfaces with fingers; clean them with professional lens paper when contaminated, and wipe non-optical surfaces with a clean soft cloth. Do not disconnect power or cables during a firmware upgrade.