



# ST35PRO LRF

THERMAL IMAGING SCOPE



YUBEEN ST35PRO LRF  
THERMAL IMAGING. PRECISION CONTROL.

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# INTRODUCTION

The ST35PRO LRF is a compact thermal imaging scope that combines an integrated laser rangefinder, hot-spot tracking, and ballistic calculation in one device.

Its 384 × 288 thermal detector with a 12 μm pixel pitch, paired with a 1344 × 1008 OLED display, delivers clear thermal images in low-visibility conditions and complete darkness.

Designed for demanding outdoor environments, the ST35PRO LRF is suitable for observation, patrol, search and rescue, and outdoor exploration.

|                    |             |              |
|--------------------|-------------|--------------|
| 384 × 288          | 12 μm       | 1344 × 1008  |
| THERMAL RESOLUTION | PIXEL PITCH | OLED DISPLAY |

## MAIN FEATURES

- High-performance image-processing chip with advanced image-detail enhancement.
- High-resolution OLED display for clear and detailed thermal imaging.
- Removable lithium battery providing up to 5 hours of continuous operation on a full charge.
- USB Type-C interface supporting an external power supply and charging.
- Wi-Fi connectivity for use with the mobile app.

## PACKING LIST

- ST35PRO LRF Thermal Imaging Scope × 1
- 18500 Rechargeable Battery × 2
- Battery Charger × 1
- USB Type-C Cable × 1
- Rail Mount Adapter × 1
- Quick Start Guide × 1

## **Laser Rangefinder**

Measures target distance accurately, with a maximum ranging distance of 1,000 m.

## **Gyroscope**

Provides real-time monitoring of the device's pitch and tilt angles.

## **Wi-Fi Connectivity**

Creates a Wi-Fi hotspot for connection to the mobile app, allowing users to capture images, record videos, and configure device settings.

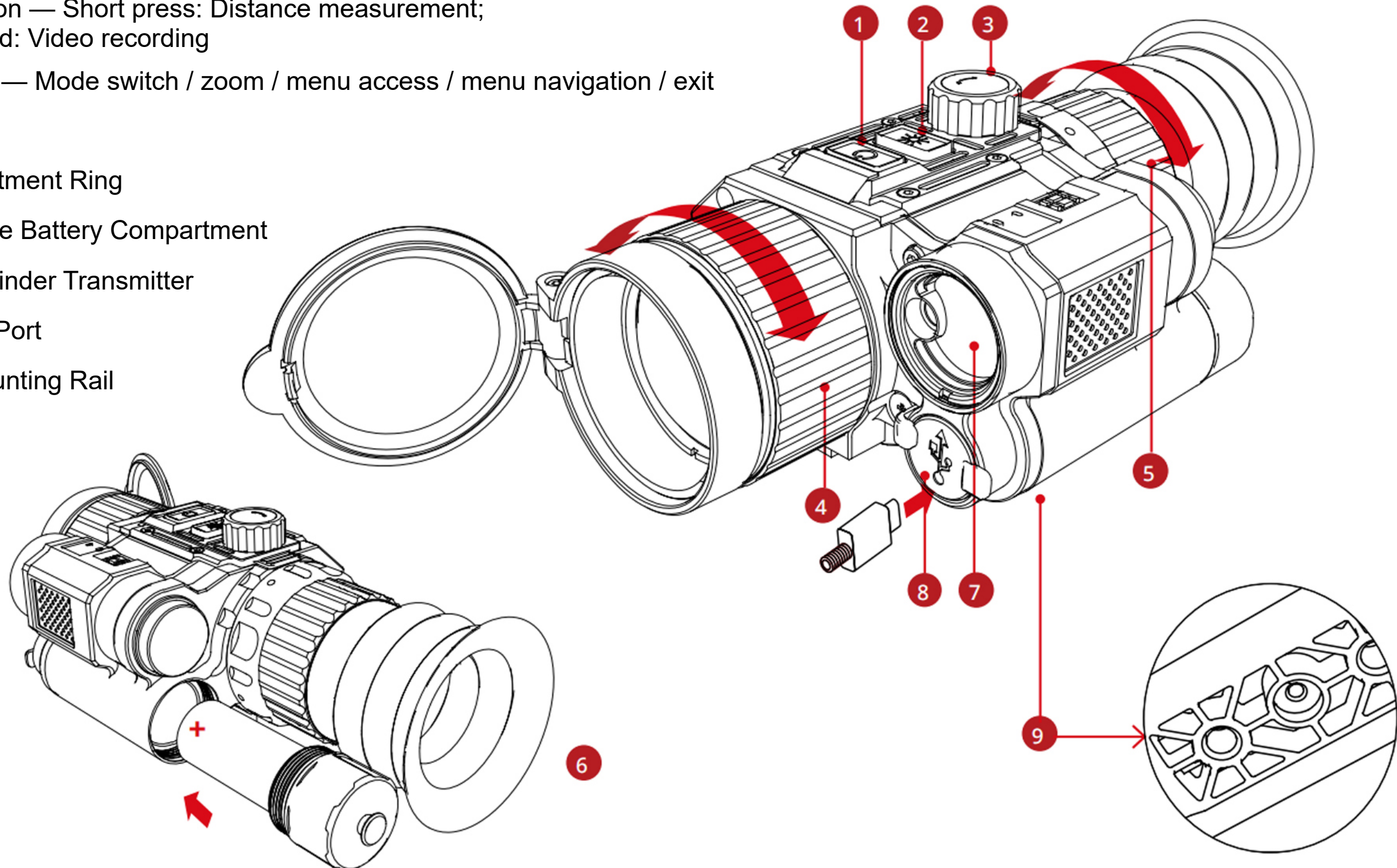
## **64 GB Internal Storage**

Built-in 64 GB storage supports image capture and video recording.

## **Ballistic Calculation**

Based on the measured distance and configured ballistic parameters, the built-in calculator estimates the point of impact.

1. Power Button — Press and hold: Power On/Off; short press: Standby
2. Ranging Button — Short press: Distance measurement; press and hold: Video recording
3. Control Knob — Mode switch / zoom / menu access / menu navigation / exit
4. Focus Ring
5. Diopter Adjustment Ring
6. Quick-Release Battery Compartment
7. Laser Rangefinder Transmitter
8. USB Type-C Port
9. Picatinny Mounting Rail



QUICK START

1. Ensure the battery is sufficiently charged before powering on the device. Use the included battery charger to charge the 18500 batteries.
2. Open the lens cover and adjust its angle carefully to avoid blocking the laser rangefinder.
3. Press and hold the Power Button (1) to turn on the device.
4. Adjust the Diopter Adjustment Ring (5) until the symbols and display image appear sharp and clear.
5. Rotate the Focus Ring (4) to focus on the target.
6. Rotate the Control Knob (3) to adjust the digital zoom.
7. Short press the Control Knob (3) to switch between color palettes.
8. Press and hold the Control Knob (3) to enter or exit the menu.  
For detailed menu operations, refer to the corresponding sections of this manual.
9. Press and hold the Power Button (1) to turn off the device.

FUNCTIONS OVERVIEW

- Non-Uniformity Correction (NUC)
- Image Smoothing
- Image Detail Enhancement
- Digital Noise Reduction
- CVBS Video Output
- Reticle Display
- Wi-Fi Hotspot
- Photo Capture
- Video Recording
- Laser Rangefinder
- Hotspot Tracking
- Auto Power-Off
- Removable Battery
- Battery Level Indicator
- Version Information
- Restore Factory Settings
- OSD (On-Screen Display)
- Ballistic Calculation
- Accelerometer
- Image Super-Resolution
- Built-in 64 GB Storage
- Picture-in-Picture (PIP) Mode
- Mobile App Support
- Brightness Adjustment
- Contrast Adjustment
- Defective Pixel Correction

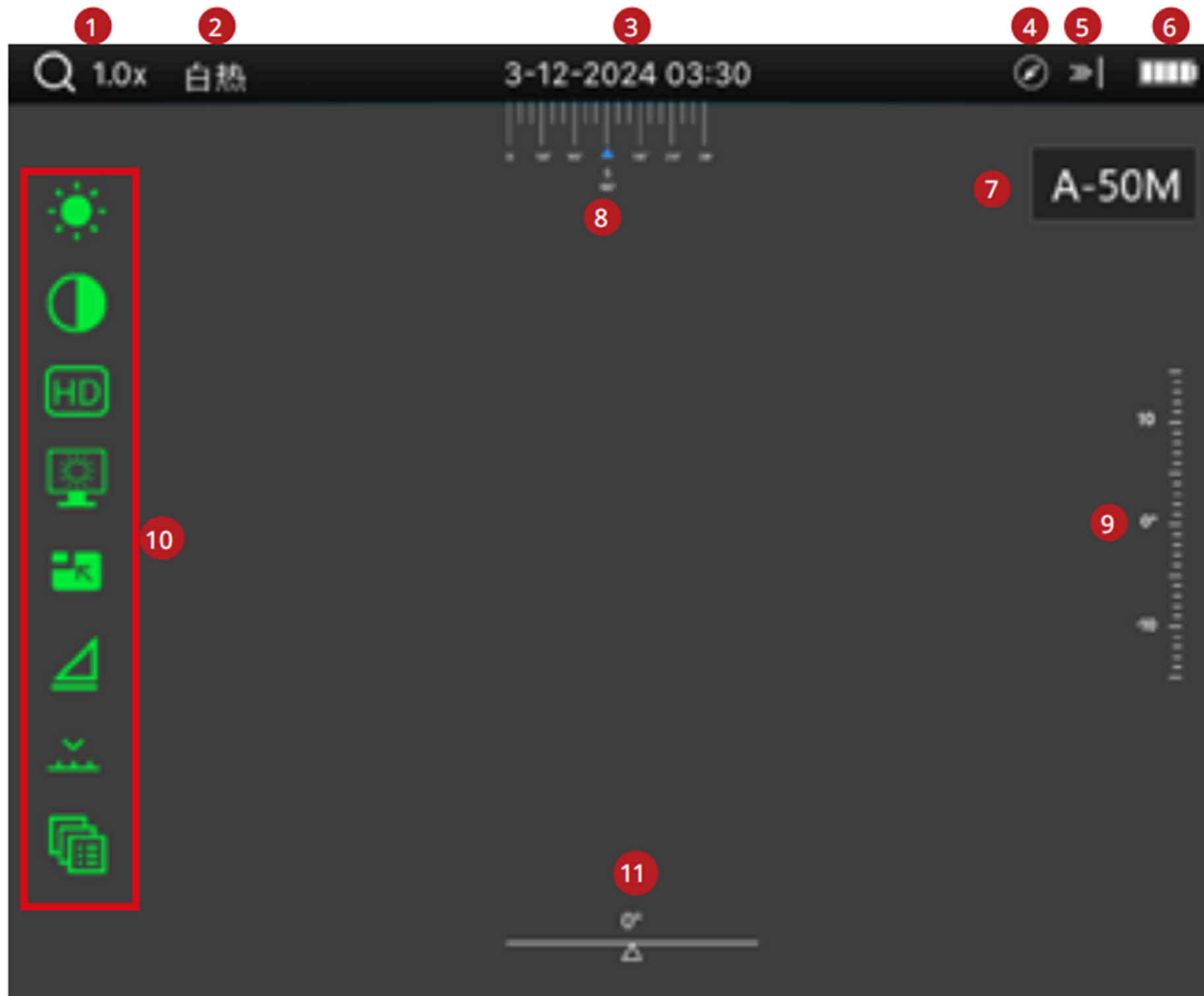
|                                        |                                                                   |
|----------------------------------------|-------------------------------------------------------------------|
| Model                                  | ST35PRO LRF                                                       |
| Lens Focal Length                      | 35 mm                                                             |
| Field of View (FOV)                    | 7.5° × 5.7°                                                       |
| Detection Range (Human Target, 1.5 px) | 1,800 m                                                           |
| Detector Resolution                    | 384 × 288, 12 μm                                                  |
| Display                                | OLED, 1344 × 1008                                                 |
| NETD                                   | ≤ 20 mK                                                           |
| Digital Zoom                           | 1×–8×                                                             |
| Spectral Range                         | 8–14 μm                                                           |
| Sensor Type                            | Uncooled Focal Plane Array                                        |
| Color Palettes                         | Black Hot, White Hot, Red Hot, Fusion, Iron Red, Green Monochrome |
| Scene Modes                            | Jungle, Recognition                                               |
| Control Method                         | 2 Buttons + Control Knob                                          |
| Shutter Control                        | Manual / Automatic                                                |
| Reticle Options                        | 7 Types                                                           |
| Laser Rangefinder                      | 1,000 m                                                           |
| Laser Wavelength                       | 905 nm                                                            |
| Ballistic Profiles                     | 5 Profiles                                                        |
| Battery Capacity                       | 2,400 mAh                                                         |
| Ballistic Calculation                  | Supported                                                         |
| Internal Storage                       | 64 GB                                                             |
| Waterproof Rating                      | IP66                                                              |
| Battery Life                           | 5 h (Observation Mode)                                            |
| Weight                                 | 540 g                                                             |
| Dimensions                             | 60 × 82 × 205 mm                                                  |

BUTTON OPERATIONS

| BUTTON             | Operating Status        | Short Press                 | Press and Hold        | Rotate Counterclockwise | Rotate Clockwise |
|--------------------|-------------------------|-----------------------------|-----------------------|-------------------------|------------------|
| Power Button (1)   | Device Off              | —                           | Power On              | —                       | —                |
|                    | Observation Interface   | Standby                     | Power Off             | —                       | —                |
| Ranging Button (2) | Observation Interface   | Measure Distance            | Start Video Recording | —                       | —                |
|                    | Single Ranging Mode     | Single Distance Measurement | —                     | —                       | —                |
|                    | Continuous Ranging Mode | Freeze / Resume Measurement | —                     | —                       | —                |
| Control Knob (3)   | Observation Interface   | Switch Color Palette        | Enter Settings Menu   | Zoom In (+)             | Zoom Out (–)     |
|                    | Menu Interface          | Confirm                     | Save and Return       | Scroll Up               | Scroll Dow       |

KEY COMBINATIONS

| Key Combination               | Operating Status      | Function            |
|-------------------------------|-----------------------|---------------------|
| Power Button + Ranging Button | Observation Interface | Quick Calibration   |
| Power Button + Control Knob   | Observation Interface | Compass Calibration |
| Ranging Button + Control Knob | Observation Interface | Firmware Upgrade    |



- 1. Magnification Status
- 2. Color Palette Status
- 3. Date & Time
- 4. Compass Status
- 5. Laser Rangefinder Status
- 6. Battery Level
- 7. Ballistic Profile
- 8. Compass Heading
- 9. Pitch Angle
- 10. Menu
- 11. Tilt Angle

## **BRIGHTNESS**

Adjusts image brightness. Select Brightness in the menu, rotate the Control Knob (3) to adjust the value, and short press the knob to confirm. Five levels are available (1–5).

## **CONTRAST**

Adjusts image contrast. Select Contrast in the menu, rotate the Control Knob (3) to adjust the value, and short press the knob to confirm. Five levels are available (1–5).

## **HD (AI SUPER-RESOLUTION)**

Enables AI super-resolution to enhance image clarity and detail. Select this function in the menu, rotate the Control Knob (3) to switch it On or Off, and short press the knob to confirm.

## **SCREEN BRIGHTNESS**

Adjusts display brightness. Select Screen Brightness in the menu, rotate the Control Knob (3) to adjust the value, and short press the knob to confirm. Five levels are available (1–5).

## **PIP (PICTURE-IN-PICTURE)**

Enables Picture-in-Picture (PIP) mode. Select PIP in the menu, rotate the Control Knob (3) to switch it On or Off, and short press the knob to confirm.

## **SHARPNESS**

Adjusts image sharpness. Select Sharpness in the menu, rotate the Control Knob (3) to adjust the value, and short press the knob to confirm. Higher values increase image detail but may also increase image noise. Five levels are available (1–5).

## **BALLISTIC PROFILES**

Stores ballistic profiles for different configurations. Select a profile in the menu, rotate the Control Knob (3) to change the selection or parameter value, and short press the knob to confirm. Up to five profiles can be stored.

## ZEROING

### PROFILE

Selects one of five zeroing profiles (A–E) for storing different zeroing configurations.

### DISTANCE

Sets the zeroing distance for the selected profile.

### RETICLE TYPE

Selects one of seven available reticle styles.

### RETICLE COLOR

Selects the display color of the reticle.

### ZOOM

Magnifies the zeroing view to allow more precise reticle adjustment.

### FREEZE

Freezes the current image during zeroing to help align the reticle with the point of impact.

### RETICLE POSITION

Adjusts the reticle position to align the reticle center with the point of impact.

## BALLISTIC CALCULATION

### SMART BALLISTICS

Enables or disables ballistic calculation. Select Smart Ballistics in the menu, rotate the Control Knob (3) to switch it On or Off, and short press the knob to confirm.

### RANGING MODE

Selects Single or Continuous ranging mode. Select Ranging Mode in the menu, rotate the Control Knob (3) to choose the desired mode, and short press the knob to confirm.

### ZOOM

Adjusts image magnification in 0.5× increments. Select Zoom in the menu, rotate the Control Knob (3) to adjust the magnification, and short press the knob to confirm.

## ADVANCED FUNCTIONS

### HOTSPOT TRACKING

Enables or disables hotspot tracking. When enabled, the device automatically marks the hottest point in the image.

### PRE-RECORDING VIDEO

Enables or disables pre-recording. When enabled, video recording starts automatically when recoil is detected.

### WI-FI

Enables or disables the Wi-Fi hotspot. After enabling Wi-Fi, open the Wi-Fi settings on your mobile device and connect to the hotspot named CENV-\*. The default password is 12345678. Once connected, the device can be accessed through the mobile app.

## CALIBRATION & DISPLAY

### BURN PROTECTION

Protects the infrared detector from extremely high heat sources. When enabled, the device automatically closes the shutter when excessive heat is detected.

### DEFECTIVE PIXEL CORRECTION

Corrects defective pixels on the detector to improve image quality.

### OSD (ON-SCREEN DISPLAY)

Enables or disables the top status bar display.

### SHUTTER MODE

Enables or disables automatic shutter calibration.

### ELECTRONIC COMPASS

Enables or disables the electronic compass.

### LASER CURSOR CALIBRATION

Calibrates the position of the laser cursor for accurate alignment.

## SYSTEM SETTINGS

### LANGUAGE

Selects the system language. Available languages include Chinese, English, German, French, Russian, Polish, Italian, Swedish, Spanish, Czech, Slovak, Portuguese, Hungarian, and Korean.

### TIME

Sets the system time.

### TIME FORMAT

Selects between 12-hour and 24-hour time formats.

### DEVICE INFORMATION

Displays device information, including the firmware version and Wi-Fi information.

### FORMAT STORAGE

Formats the built-in 64 GB storage.

### FACTORY RESET

Restores all settings to their factory defaults.

The device provides two scene modes and six color palettes for different viewing conditions and user preferences.

## SCENE MODES

Jungle Mode



Recognition Mode



## COLOR PALETTES

White Hot



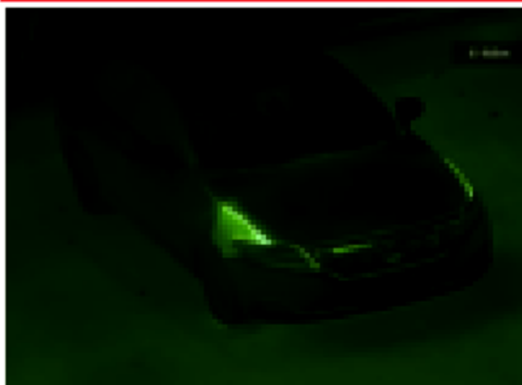
Black Hot



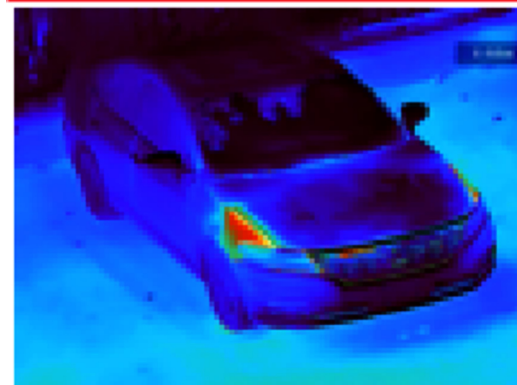
Red Hot



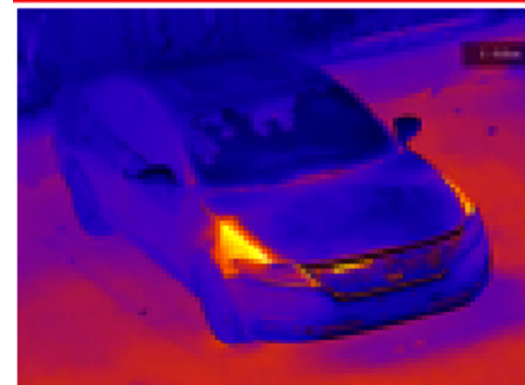
Green Monochrome



Fusion



Iron Red



## APP CONNECTION

- 1 Enable Wi-Fi on the device.
- 2 Open the Wi-Fi settings on your mobile device and connect to the device hotspot.
- 3 Select the hotspot named CENV-\*.  
The default password is 12345678.



**Hotspot Name:** CENV-\*



**Default Password :** 12345678

- 4 Open the mobile app to access the device.

## DOWNLOAD THE APP



Scan the QR code to  
download the mobile app.