

## Guide Sensmart TR650-A

# Guide Sensmart TR 650 A Thermal Riflescope User Manual

Model: TR650-A

## 1. INTRODUCTION

This manual provides comprehensive instructions for the safe and effective operation, setup, and maintenance of the Guide Sensmart TR 650 A Thermal Riflescope. Please read this manual thoroughly before using the device to ensure optimal performance and user safety.

The TR 650 A is an advanced thermal imaging riflescope designed for precision and performance in various environmental conditions. It features a high-resolution thermal detector, a powerful lens, and an AMOLED display, making it suitable for demanding applications.

## 2. SAFETY INFORMATION

Always prioritize safety when handling optical and thermal devices. Failure to follow safety guidelines may result in injury or damage to the device.

- Do not look directly at intense light sources through the riflescope, as this may damage the device or your eyes.
- Ensure the riflescope is securely mounted before use to prevent accidental detachment.
- Keep the device away from extreme temperatures, direct sunlight, and corrosive substances.
- Do not attempt to disassemble or modify the riflescope. Refer all servicing to authorized personnel.
- Store the device in a dry, cool place when not in use.

## 3. PACKAGE CONTENTS

Verify that all items are present in the package:

- Guide Sensmart TR 650 A Thermal Riflescope
- Quick-release scope mount
- 18650 Battery (if included)
- USB Cable
- Lens Cleaning Cloth

- User Manual (this document)

## 4. PRODUCT FEATURES

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The TR 650 A Thermal Riflescope boasts several key features:

- **High-Performance Thermal Imaging:** Equipped with a 640×512 12µm uncooled VOx infrared detector and NETD 20mK for precise thermal detection.
- **Long-Range Detection & Magnification:** Features a 50mm F1.0 germanium lens with 2.9x to 23.2x magnification and a 2800-yard detection range.
- **Ballistic Calculator & Smart Connectivity:** When paired with the S600 LRF and TargetIR Ballistics App, provides real-time shooting calculations.
- **1024x768 AMOLED Display:** A 0.39-inch AMOLED display delivers high-contrast visuals, with 10 reticle types and 10 brightness levels.
- **Durable, Weather-Resistant Design:** IP67-rated waterproof, 800G shock resistance, and an operating temperature range of -22°F to +122°F.

## 5. DEVICE OVERVIEW

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Figure 1: Front-side view of the Guide Sensmart TR 650 A Thermal Riflescope, showing the objective lens, control buttons, and eyepiece.



Figure 2: Angled view of the Guide Sensmart TR 650 A Thermal Riflescope, highlighting its compact design and button placement.

## 6. SETUP

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### 6.1. Battery Installation

1. Locate the battery compartment on the riflescope.
2. Open the battery compartment cover.
3. Insert one 18650 battery, ensuring correct polarity (+/-).
4. Close the battery compartment cover securely.

### 6.2. Mounting the Riflescope

The TR 650 A comes with a quick-release scope mount for easy attachment to compatible rifle platforms.

1. Attach the quick-release mount to the riflescope according to the mount's instructions.
2. Securely fasten the riflescope with the attached mount onto your rifle's picatinny rail or compatible mounting system.
3. Ensure the mount is tightened sufficiently to prevent movement during recoil, but do not overtighten.

### 6.3. Initial Power On and Focus Adjustment

1. Press and hold the power button until the display illuminates.
2. Adjust the diopter on the eyepiece for a clear view of the display.
3. Rotate the objective lens focus ring to bring the thermal image into sharp focus for your target distance.

## 7. OPERATING INSTRUCTIONS

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### 7.1. Basic Operation

- **Power On/Off:** Press and hold the power button.
- **Menu Navigation:** Use the joystick or designated buttons to navigate through menu options.

- **Image Capture:** Press the photo button to capture still images.
- **Video Recording:** Press the video button to start/stop recording.

## 7.2. Reticle Selection and Adjustment

The TR 650 A offers 10 customizable reticle types and 10 brightness levels.

1. Access the main menu.
2. Navigate to the "Reticle" settings.
3. Select your desired reticle pattern.
4. Adjust the reticle brightness as needed.
5. Perform zeroing procedures as required for your specific rifle and ammunition.

## 7.3. Ballistic Calculator Integration

For advanced ballistic calculations, pair the TR 650 A with the S600 LRF (Laser Range Finder) and the TargetIR Ballistics App.

1. Ensure the S600 LRF is connected and calibrated.
2. Download and install the TargetIR app on your mobile device.
3. Connect the riflescope to the app via Wi-Fi.
4. Input your ballistic data into the app.
5. The system will provide real-time shooting solutions based on range, environmental factors, and bullet trajectory.

## 7.4. Wi-Fi Connectivity and TargetIR App

The integrated Wi-Fi allows for seamless connection to the TargetIR app for remote control, image/video transfer, and firmware updates.

- Activate Wi-Fi in the riflescope's settings.
- Connect your mobile device to the riflescope's Wi-Fi network.
- Open the TargetIR app to access live view, capture media, and manage settings.

## 8. MAINTENANCE

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### 8.1. Cleaning the Lenses

- Use the provided lens cleaning cloth or a soft, lint-free cloth.
- Gently wipe the lens surfaces to remove dust and smudges.
- For stubborn dirt, use a small amount of lens cleaning solution applied to the cloth, not directly to the lens.
- Avoid abrasive materials or excessive force, which can scratch the lens coatings.

### 8.2. Battery Care

- Recharge batteries using a compatible charger.
- Remove batteries if the device will not be used for an extended period.
- Store batteries in a cool, dry place.

### 8.3. Storage

When not in use, store the riflescope in its protective case or a suitable storage environment to protect it from dust, moisture, and physical damage.

## 9. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Low or dead battery; incorrect battery installation.	Charge or replace battery; ensure correct polarity.
Image is blurry.	Improper focus adjustment; dirty lens.	Adjust objective lens focus and diopter; clean lenses.
Wi-Fi connection issues.	Wi-Fi not enabled; incorrect password; app issues.	Enable Wi-Fi on device; verify password; restart app/device.
Short battery life.	Old battery; extreme temperatures; high brightness settings.	Replace battery; operate within recommended temperature range; reduce display brightness.

## 10. SPECIFICATIONS

Feature	Detail
Model Name	TR650-A
Detector Type	640×512 12µm VOx Uncooled Infrared Detector
NETD	≤20mK
Refresh Rate	50Hz
Lens	50mm F1.0 Germanium Lens
Magnification	2.9x to 23.2x
Detection Range	2800 yards
Display	0.39-inch 1024×768 AMOLED
Reticle Types	10 customizable types
Brightness Levels	10 levels
Waterproof Rating	IP67
Shock Resistance	Up to 800G
Operating Temperature	-22°F to +122°F (-30°C to +50°C)
Battery Type	18650 (replaceable)
Battery Life	Up to 8 hours
Connectivity	Wi-Fi (TargetIR App compatible)
Dimensions	3.62" L x 2.76" W x 8.62" H
Material	Metal

## 11. WARRANTY AND SUPPORT

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The Guide Sensmart TR 650 A Thermal Riflescope comes with a **10-Year Warranty** from the manufacturer, Guide Sensmart.

For technical support, warranty claims, or service inquiries, please contact Guide Sensmart customer service through their official website or the contact information provided with your purchase.

For more information, visit the [Guide Sensmart Store on Amazon](#).

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