

HIKMICRO HM-TJ32-7RF-Mini2Plus(O-STD)

HIKMICRO Mini2Plus Thermal Camera User Manual

Model: HM-TJ32-7RF-Mini2Plus(O-STD)

Brand: HIKMICRO

INTRODUCTION

This user manual provides comprehensive instructions for the HIKMICRO Mini2Plus Thermal Camera. It covers setup, operation, maintenance, and troubleshooting to ensure optimal performance and longevity of your device. The HIKMICRO Mini2Plus is a compact, high-resolution thermal imager designed for various applications including PCB repair, building inspection, electrical inspection, and outdoor tracking.

UNBOXING AND PACKAGE CONTENTS

Upon opening the package, verify that all components are present. The standard package for the HIKMICRO Mini2Plus includes the following items:

- Mini2Plus thermal camera body
- USB-C male to USB-C female Adapter
- Type-C male to Type-C female Cable (Extension Cable)
- Carrying Case
- Quick Start Guide

Mini Design

Compact thermal camera for easy carrying and storage.

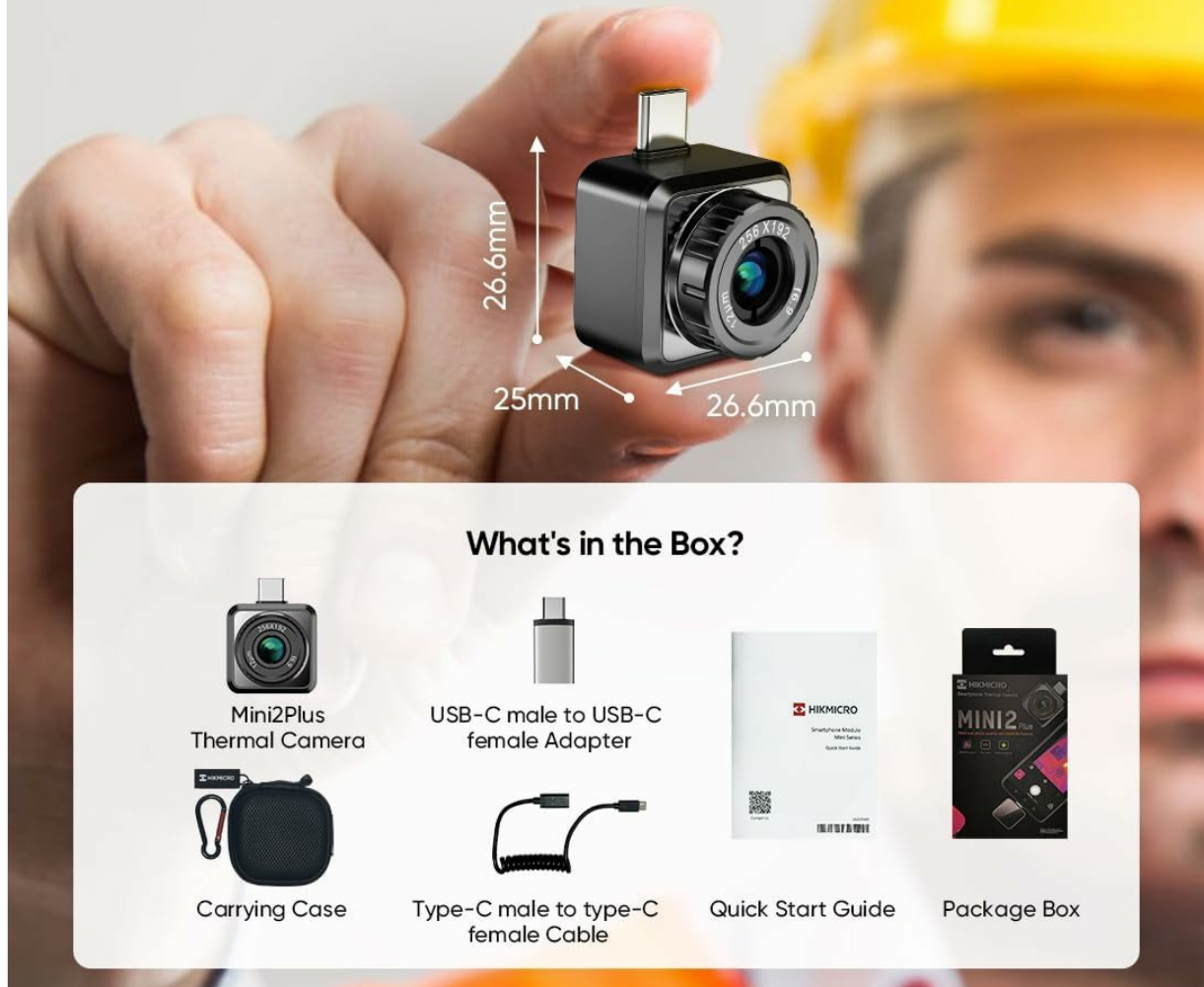


Figure 1: Included accessories with the HIKMICRO Mini2Plus thermal camera.

Unboxing Video Guide

For a visual guide on unboxing and identifying the components, please refer to the official unboxing video below:

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Video 1: Official HIKMICRO Mini2Plus Unboxing Video. This video demonstrates the contents of the product package and how to identify each accessory.

SETUP AND CONNECTION

The HIKMICRO Mini2Plus is designed for easy plug-and-play operation with compatible Android smartphones and tablets. Follow these steps to set up your device:

1. **Download the HIKMICRO Viewer App:** Before connecting the thermal camera, download and install the official HIKMICRO Viewer app from the Google Play Store on your Android device.
2. **Connect the Camera:**
 - **Direct Connection:** Plug the USB-C connector of the Mini2Plus directly into your smartphone's

USB-C port. The device is battery-free and draws power directly from your phone.

- **Using the Extension Cable:** For flexible inspection in hard-to-reach areas, connect the Mini2Plus to the provided 15.8-inch (40cm) extension cable, and then plug the cable into your smartphone's USB-C port.
 - **Using the USB-C Adapter:** If your phone has a thick case, use the included USB-C male to USB-C female adapter to ensure a secure connection.
3. **Launch the App:** Once connected, the HIKMICRO Viewer app should automatically launch or prompt you to open it. If not, manually open the app.
 4. **Grant Permissions:** The app may request permissions for file access, camera, and media. Grant these permissions for full functionality.



Figure 2: Direct connection of the HIKMICRO Mini2Plus to an Android smartphone.

Inspect with Flexibility

USB C Adapter for Thick Phone Case

Compatible with phones that have an Otterbox case



Extension Cable for convenient inspection

Scan difficult-to-view and hard-to-reach areas



Figure 3: Using the extension cable for convenient inspection of difficult-to-reach areas.

Flexible Measurements Settings

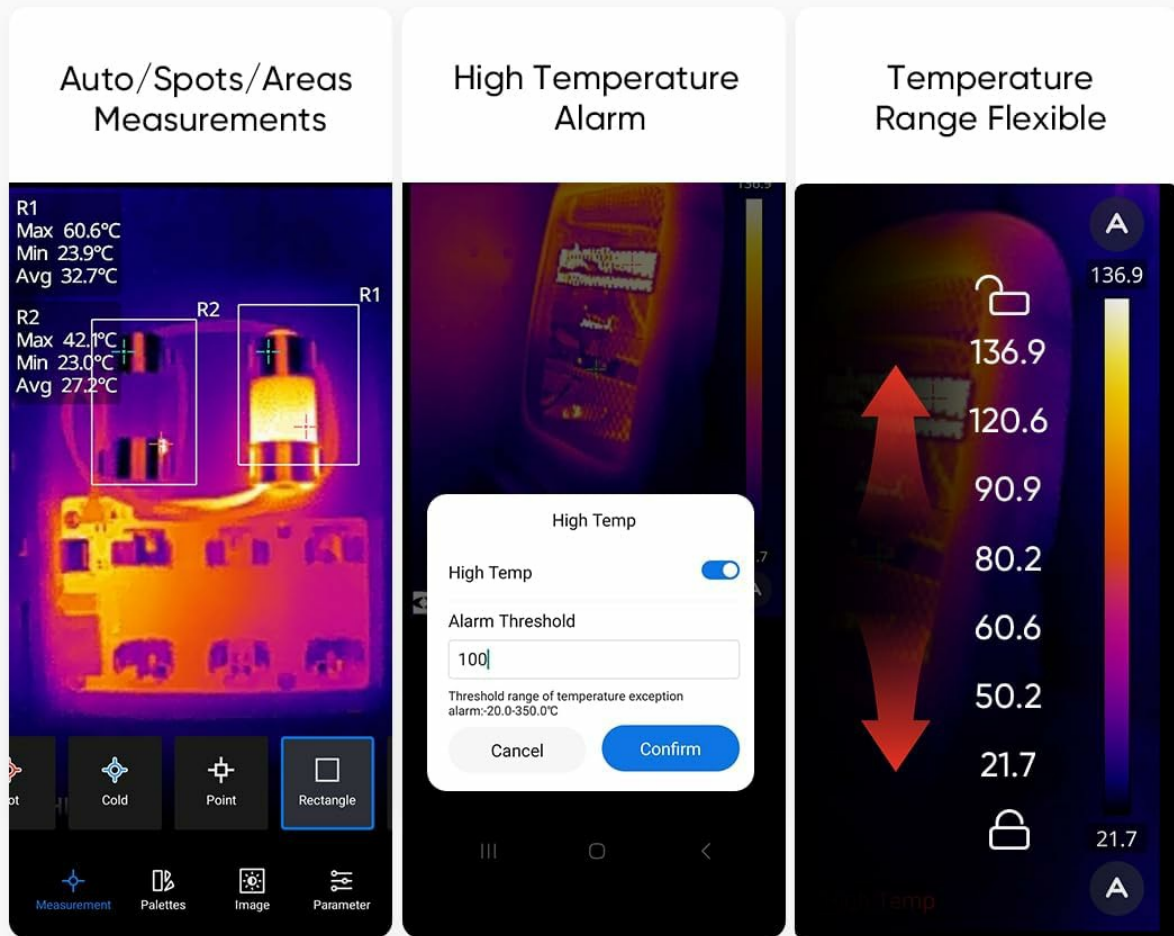


Figure 4: The adjustable focal lens allows for clear thermal imaging from 10cm (PCB inspection) to 50m (outdoor exploration).

Quick Start and Usage Video

Watch the official tutorial for a quick guide on how to get started with your HIKMICRO Mini2Plus:

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Video 2: How to use HIKMICRO Mini2Plus Thermal Imager. This video covers initial setup, manual focus adjustment, and basic app functions.

OPERATING INSTRUCTIONS

The HIKMICRO Viewer app provides a user-friendly interface for operating your Mini2Plus thermal camera. Here are the key functions:

1. Manual Focus Adjustment

The Mini2Plus features a manual focus ring (6.9mm adjustable focal length) to ensure clear thermal images at various distances, from close-up PCB inspections (10cm) to distant outdoor observations (50m).

- Rotate the focus ring on the thermal camera body until the image on your smartphone screen appears sharp and clear for your target distance.

2. Image Quality and Refresh Rate

The camera boasts a 256x192 IR resolution and $<0.04^{\circ}\text{C}$ thermal sensitivity, providing superior image clarity. With a 25Hz refresh rate, it delivers smooth scene-panning views, crucial for viewing moving objects or quickly scanning large areas.



Figure 5: Superior image clarity and smooth video performance of the Mini2Plus.

3. Flexible Measurement Settings

The app offers various measurement presets and customization options:

- **Automatic Presets:** Utilize Automatic Center Spot, Hot Spot, and Cold Spot recognition for quick analysis.
- **Custom Measurements:** Set up to 3 Custom Temperature Spots or 3 Custom Area measurements (Highest, Lowest) for specific points of interest.
- **Color Palettes:** Choose from 15 different color palettes to best visualize temperature differences for your application.
- **Temperature Limits:** Define Upper and Lower temperature measurement limits for focused analysis.

- **Emissivity and Distance:** Adjust emissivity and distance settings within the app to ensure accurate temperature readings.

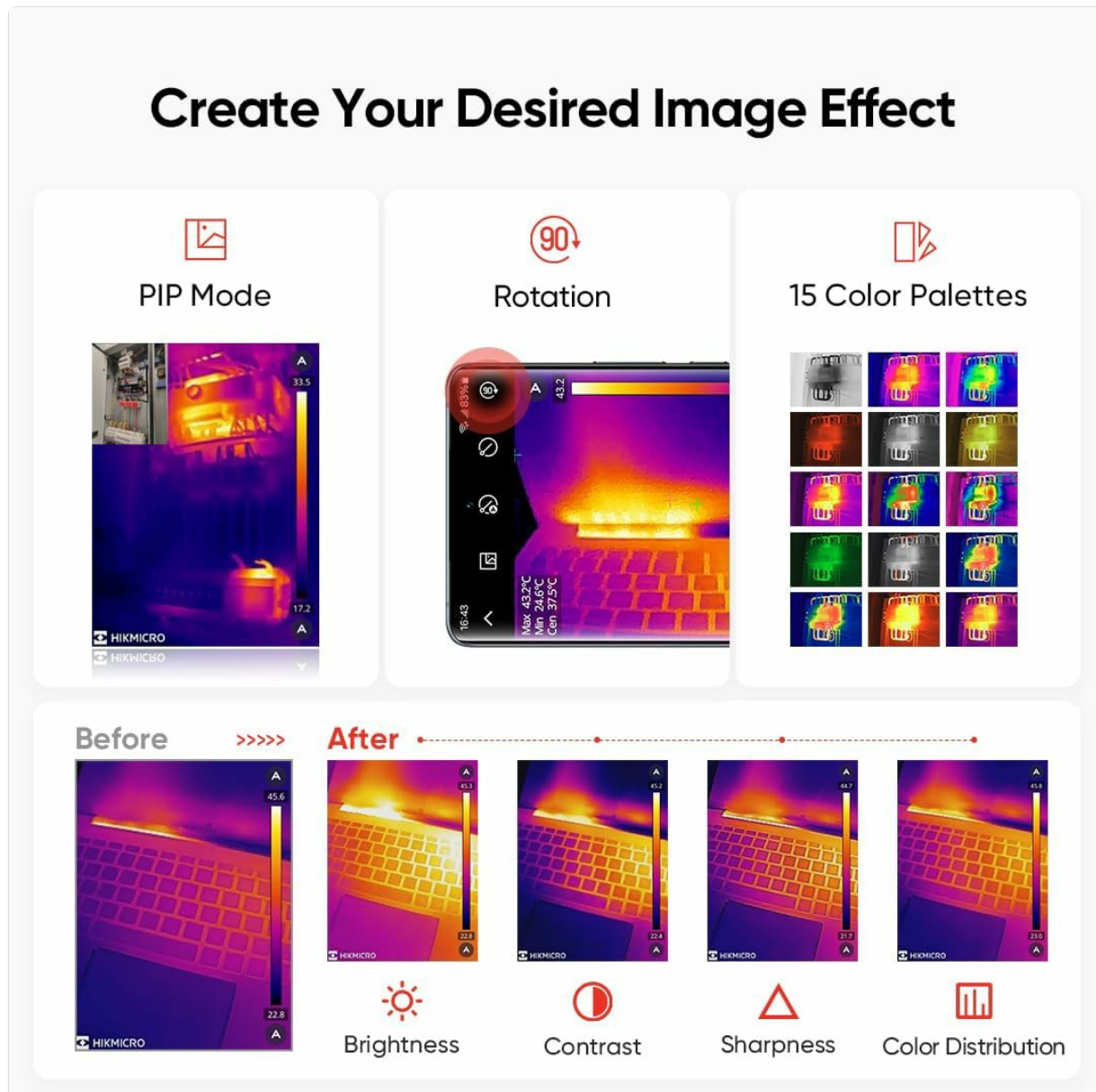


Figure 6: Customizable measurement settings for precise thermal analysis.

4. Image and Video Capture

Capture thermal images and record videos directly from the app:

- Tap the camera icon to capture a still thermal image.
- Switch to video mode to record thermal video footage.

5. Image Enhancement and Rotation

Customize the visual appearance of your thermal images:

- **Adjustments:** Fine-tune sharpness, contrast, brightness, and color distribution for enhanced image details.
- **PIP Mode:** Utilize Picture-in-Picture (PIP) mode to overlay a visual image on a thermal image for better context.
- **Auto-Rotation:** The auto-rotation function syncs the screen with the shot direction.
- **Manual 90° Rotation:** Manually rotate the image 90 degrees for flexible inspection angles.

Wide Compatibility

Compatible with Android phones/tablets and Windows laptops.



Figure 7: Options to create desired image effects and adjust display orientation.

KEY FEATURES

The HIKMICRO Mini2Plus Thermal Camera is engineered with advanced features to provide reliable and accurate thermal imaging capabilities:

- **Enhanced Image Quality:** Offers a 256x192 IR resolution and a thermal sensitivity of less than 0.04°C. The 25Hz refresh rate ensures smooth scene-panning and clear viewing of moving objects. Users can adjust sharpness, contrast, brightness, and color distribution for optimal image detail.
- **Flexible Measurement Settings:** Includes three dimensions presets (Automatic Center Spot, Hot Spot, Cold Spot recognition) and allows for three custom temperature spots or three custom area measurements (Highest, Lowest). It provides 15 color palettes for diverse visualization needs and supports setting upper and lower temperature measurement limits.
- **Accurate Temperature Reading:** Leveraging HIKMICRO's advanced technology, the Mini2Plus can detect temperature differences as small as 0.04°C, with a temperature reading accuracy discrepancy of just $\pm 2\%$.
- **Battery-Free, Low Consumption:** Designed to be battery-free, eliminating the need for charging

before use. Its ultra-low power requirement of 0.36W allows for extended operation without significantly draining the host device's battery, tested for up to 8 hours of runtime on compatible smartphones.

- **Portable & Easy to Use:** Weighing only 0.85 ounces (24 grams), the Mini2Plus is exceptionally compact and lightweight. It offers plug-and-play functionality with Android smartphones and tablets, making it ready for use in seconds. Features like auto-rotation, manual 90° rotation, and the included 15.8-inch extension cable enhance flexibility for various inspection scenarios.

MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your HIKMICRO Mini2Plus Thermal Camera:

- **Cleaning the Lens:** Gently clean the thermal lens with a soft, lint-free cloth. For stubborn smudges, use a lens cleaning solution specifically designed for optics. Avoid abrasive materials or harsh chemicals that could damage the lens coating.
- **Device Body Cleaning:** Wipe the camera body with a soft, damp cloth. Do not immerse the device in water or use excessive liquid.
- **Storage:** When not in use, store the Mini2Plus in its provided hard carrying case to protect it from dust, moisture, and physical damage. Store in a cool, dry place away from direct sunlight and extreme temperatures.
- **Software Updates:** Regularly check for and install updates for the HIKMICRO Viewer app to ensure you have the latest features, performance improvements, and bug fixes.

TROUBLESHOOTING

If you encounter issues with your HIKMICRO Mini2Plus, try the following troubleshooting steps:

- **Device Not Recognized:**
 - Ensure your smartphone is compatible with the Mini2Plus (Android 7.0+, USB-C, OTG support).
 - Check the USB-C connection. Try unplugging and re-plugging the camera.
 - If using an extension cable or adapter, ensure they are securely connected.
 - Verify that your phone's OTG (On-The-Go) function is enabled in settings, if applicable.
 - Restart your smartphone.
- **App Not Launching/Crashing:**
 - Ensure the HIKMICRO Viewer app is updated to the latest version.
 - Clear the app's cache and data in your phone's settings.
 - Reinstall the app.
 - Check if all necessary app permissions (camera, storage) are granted.
- **Unclear or Blurry Image:**
 - Adjust the manual focus ring on the camera until the image is clear.

- Ensure the thermal lens is clean and free from dust or smudges.
- Verify that emissivity and distance settings in the app are correctly configured for your target.

- **Inaccurate Temperature Readings:**

- Check and adjust the emissivity setting in the app based on the material being inspected.
- Ensure the distance setting in the app matches your actual distance to the target.
- Allow the camera to stabilize for a few moments after connecting, especially in varying ambient temperatures.

If these steps do not resolve the issue, please contact HIKMICRO customer support for further assistance.

SPECIFICATIONS







Feature	Detail
Model Name	Mini2Plus
Item Model Number	HM-TJ32-7RF-Mini2Plus(O-STD)
Brand	HIKMICRO
IR Resolution	256 x 192 pixels
Thermal Sensitivity	<0.04°C (40 mK)
Refresh Rate	25Hz
Focal Length	6.9mm (Adjustable)
Temperature Range	-4°F to 622°F (-20°C to 328°C)
Accuracy	±2%
Connectivity Technology	USB-C
Power Source	Battery Powered (from host device)
Power Consumption	0.36W (Ultra-low)
Outer Material	Aluminum
Weight	0.85 ounces (24 grams)
Package Dimensions	7.87 x 4.29 x 2.32 inches
Country of Origin	China
Date First Available	December 1, 2023



WARRANTY AND SUPPORT

For detailed warranty information, product registration, or technical support, please visit the official HIKMICRO website or contact their customer service department. Keep your purchase receipt as proof of purchase for warranty claims.

HIKMICRO Official Store: [Visit HIKMICRO Store on Amazon](#)

Related Documents - HM-TJ32-7RF-Mini2Plus(O-STD)

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<div></div>	<p>HIKMICRO Thermal Image Scope User Manual</p> <p>Comprehensive user manual for the HIKMICRO Thermal Image Scope, detailing features, operation, maintenance, and troubleshooting. Learn how to use distance measurement, hot tracking, reticle correction, and connect to the HIKMICRO Sight App.</p>
<div></div>	<p>HIKMICRO E03 Pocket Thermal Camera User Manual</p> <p>User manual for the HIKMICRO E03 Pocket Thermal Camera, detailing its features, operation, and software integration.</p>
<div></div> <div> Contact Us</div>	<p>HIKMICRO B Series Handheld Thermography Camera Quick Start Guide</p> <p>Get started quickly with the HIKMICRO B Series Handheld Thermography Camera. This guide provides essential information on setup, operation, and safety for thermal imaging applications.</p>

	<p>HIKMICRO Handheld Thermography Camera User Manual - Comprehensive Guide</p> <p>A comprehensive user manual for the HIKMICRO HM-TP31-3AUF-E1L handheld thermography camera, detailing its features, operation, safety guidelines, regulatory compliance, and technical specifications.</p>
	<p>HIKMICRO GH25L Handheld Thermal Monocular Camera Quick Start Guide</p> <p>Quick start guide for the HIKMICRO GH25L handheld thermal monocular camera. Learn about its features, components, battery installation, safety, and regulatory information.</p>