TOPDON TC002C DUO

TOPDON TC002C Duo Thermal Camera User Manual

Model: TC002C DUO

Introduction

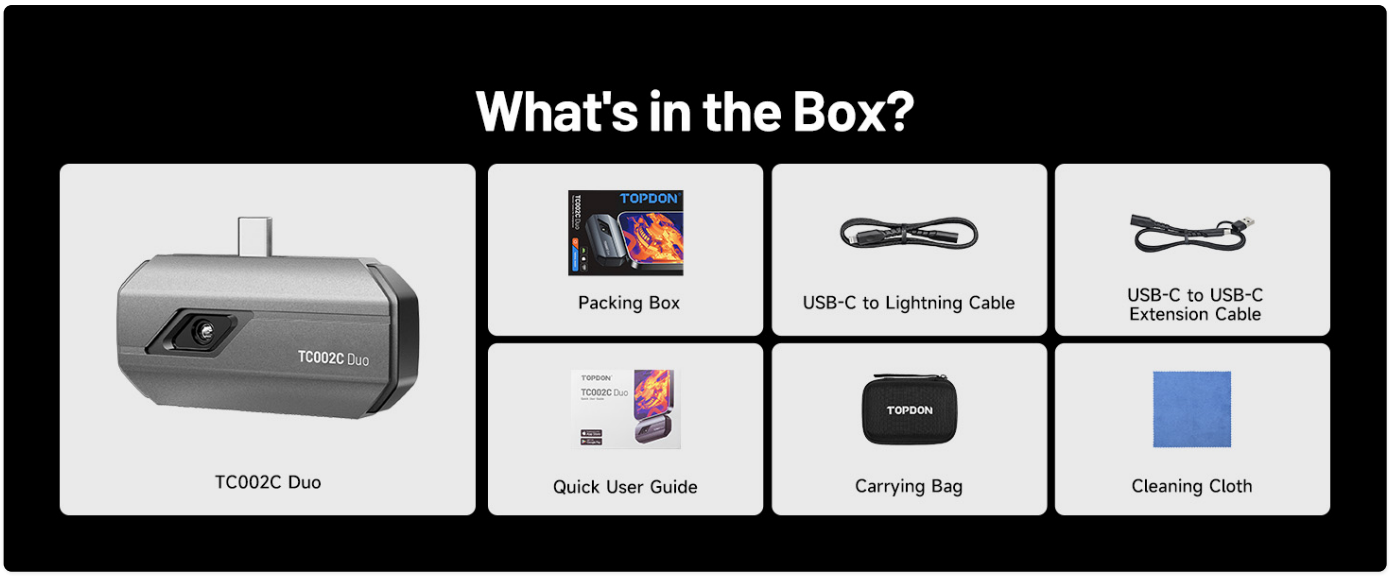
The TOPDON TC002C Duo Thermal Camera is a compact and versatile thermal imaging device designed for use with USB-C compatible smartphones and tablets, including iOS, Android, and Windows devices. It provides enhanced thermal imaging capabilities for various applications, from home inspections to automotive diagnostics.



The TOPDON TC002C Duo Thermal Camera connected to a smartphone, showcasing its thermal imaging display.

What's in the Box

- TC002C Duo Thermal Imager
- USB-C to USB-C Cable
- USB-C to Lightning Cable
- Quick User Guide
- Carrying Bag
- Cleaning Cloth



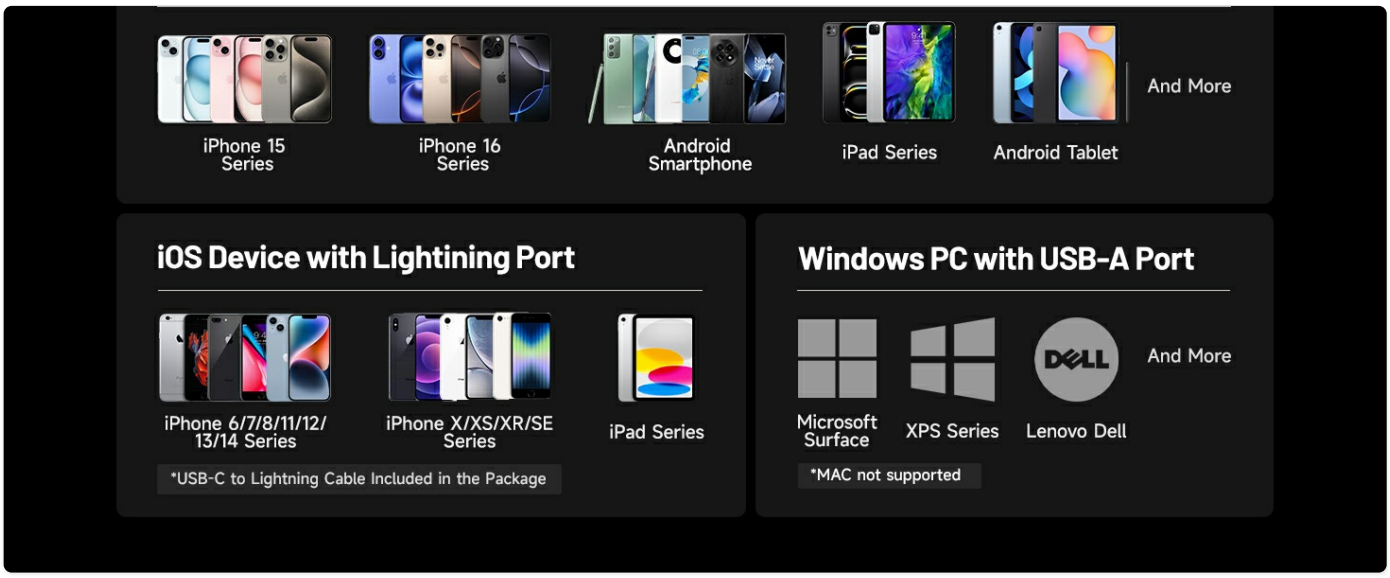
The complete packing list for the TC002C Duo, ensuring you have all necessary accessories.

Compatibility

The TC002C Duo is designed for universal USB-C compatibility, working seamlessly with a wide range of smartphones and tablets. It supports:

- USB-C iOS devices (e.g., latest iPhones, iPads)
- USB-C Android devices
- Windows PCs with USB-A port (using appropriate cable)

Note: Not compatible with Mac devices or Android 16 devices temporarily.



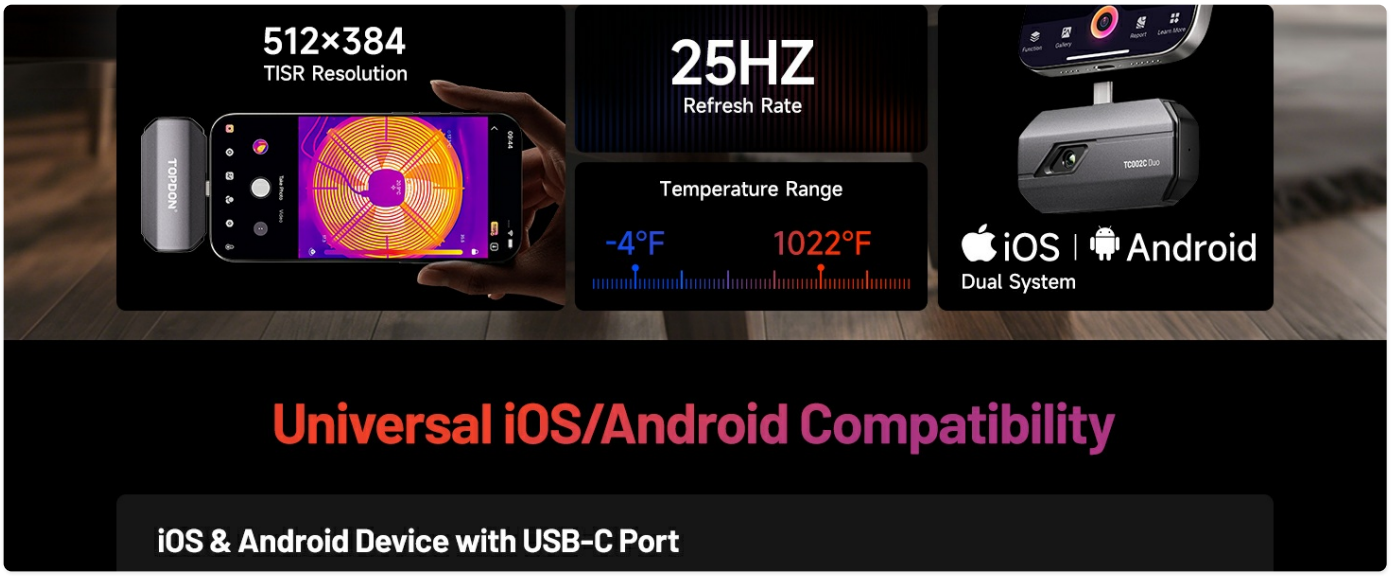
The thermal camera offers universal compatibility with USB-C iOS, Android, and Windows devices.

Setup

1. **Download the App:** Search for and download the "TopInfrared" app from your device's app store (App Store for iOS, Google Play for Android).
2. **Connect the Device:** Plug the TC002C Duo directly into your smartphone or tablet's USB-C port. If your device uses a Lightning port, use the provided USB-C to Lightning cable. For Windows PCs, use the appropriate USB-C to

USB-A cable.

3. **Launch the App:** Open the TopInfrared app. The device should be automatically detected and ready for use.

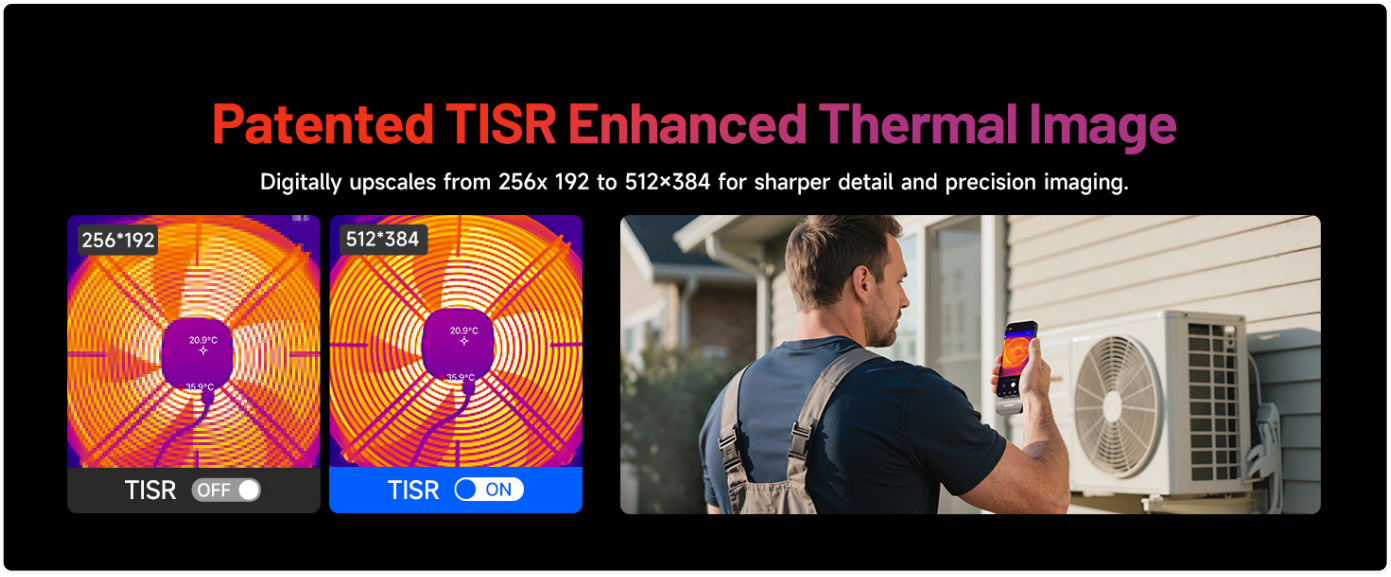


The device connects directly to your smartphone via USB-C, enabling immediate thermal imaging through the dedicated app.

Operating Instructions

Enhanced Thermal Resolution (TISR)

The TC002C Duo features TISR (TOPDON Image Super Resolution) technology, which enhances the native 256×192 IR resolution to a sharper 512×384 resolution. This provides greater detail in thermal images. The device also boasts a 25Hz refresh rate and a high thermal sensitivity of 40mK for smooth, real-time tracking.



TISR technology digitally upscales thermal images for sharper detail and precision.

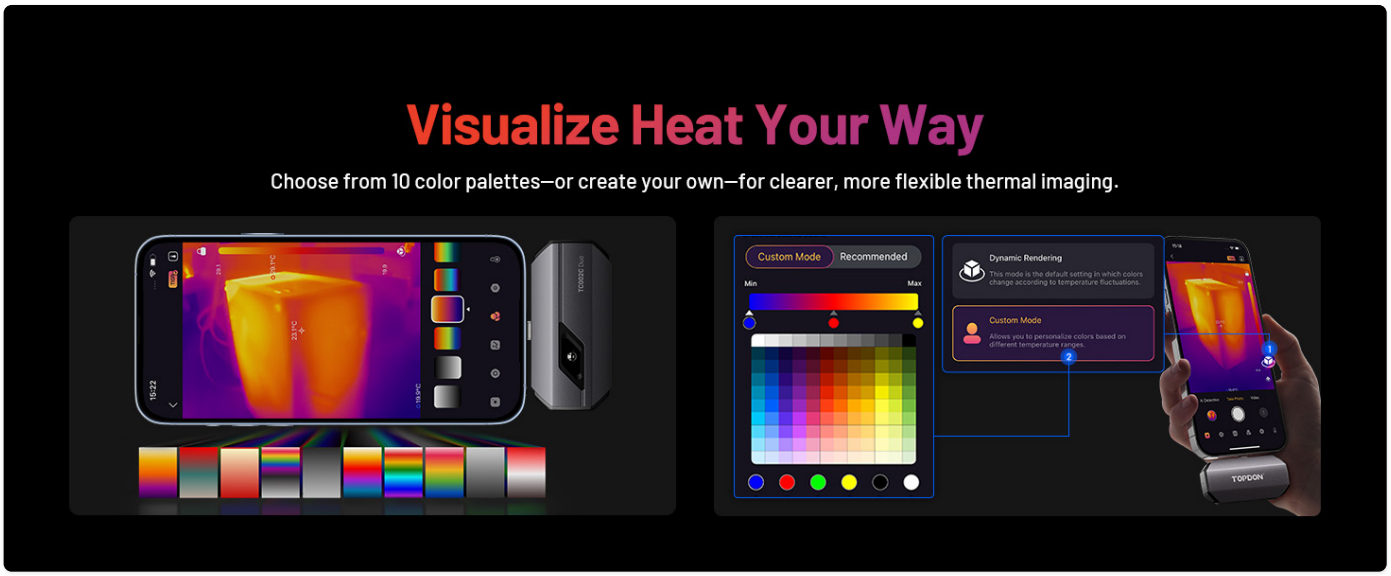
Temperature Range and Measurement

The camera can accurately read temperatures from -4°F to 1022°F (-20°C to 550°C) with an accuracy of ±2°C or 2%. You can view real-time temperature variations and customize temperature limits with colorful displays. The app allows you to adjust ambient temperature, distance to spot, and emissivity for tailored results. You can also switch between Celsius (°C) and Fahrenheit (°F) units.

Customize measurement parameters within the app for precise temperature readings.

Color Palettes

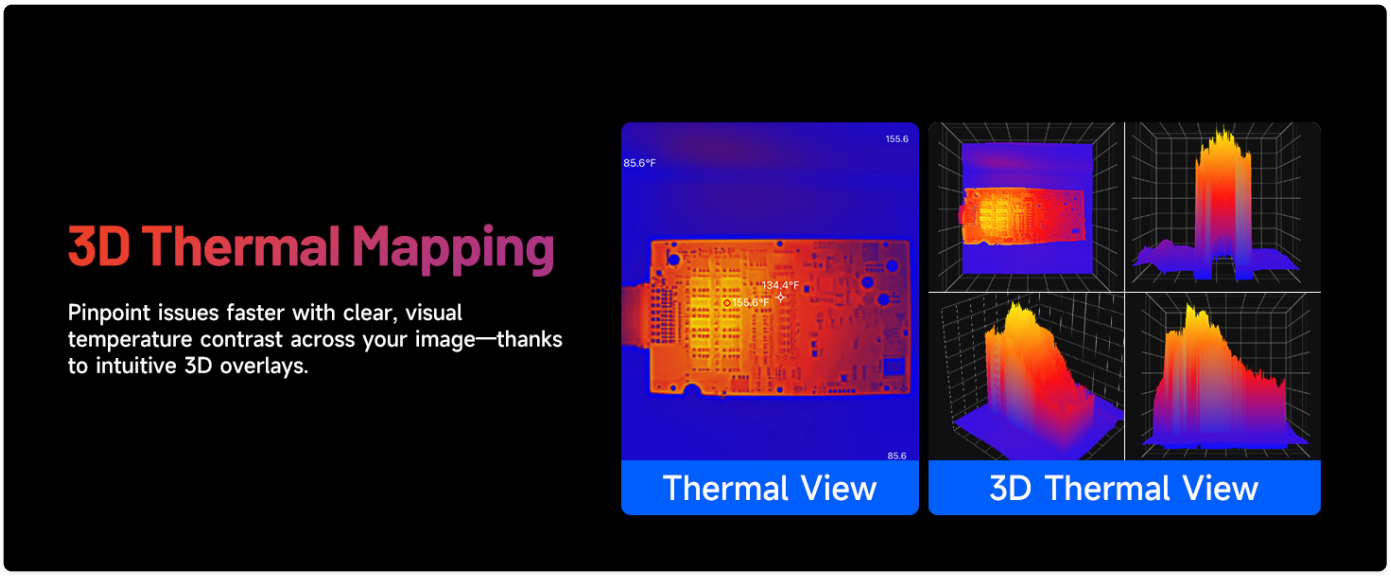
Choose from 10 different color palettes or create your own custom palette to visualize heat patterns in a way that best suits your application and preference.



Select from multiple color palettes to enhance thermal visualization.

3D Thermal Mapping

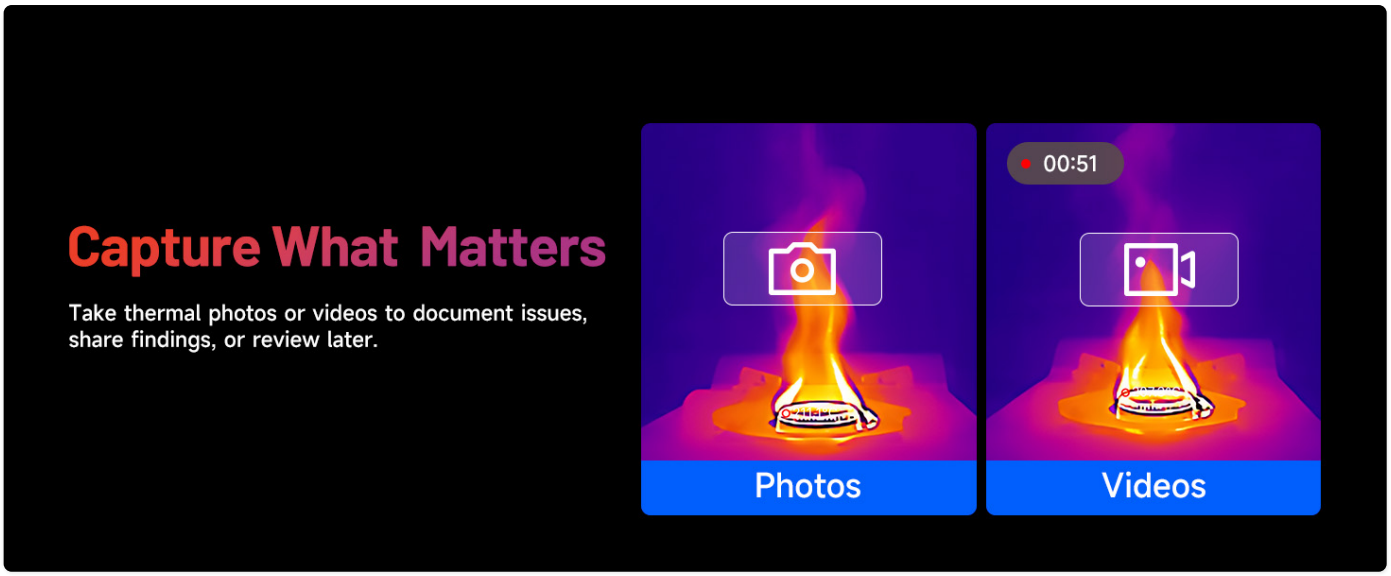
The device supports 3D thermal mapping, allowing you to pinpoint issues faster with clear, visual temperature contrast across your image through intuitive 3D overlays.



Utilize 3D thermal mapping for advanced analysis of heat distribution.

Photo & Video Recording

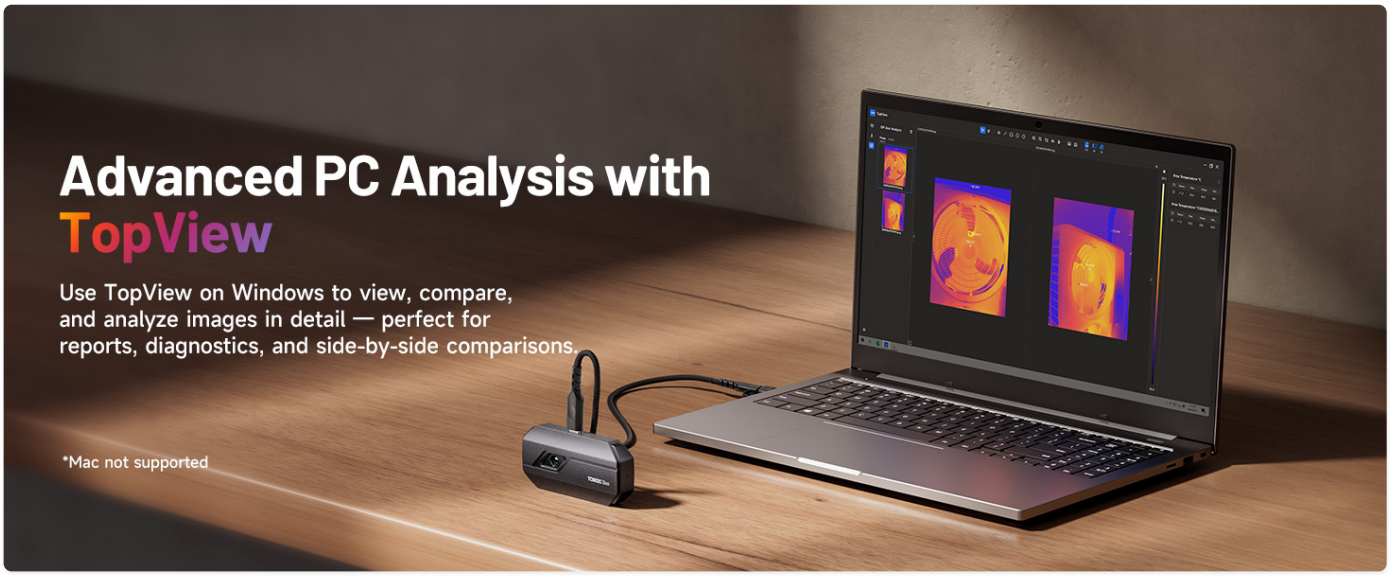
Capture thermal photos and videos directly through the app to document findings, share information, or review data later.



Record thermal images and videos for documentation and analysis.

PC Analysis with TopView

For more in-depth analysis, use the TopView software on a Windows PC to view, compare, and analyze thermal images. This is ideal for detailed reports, diagnostics, and side-by-side comparisons. (Mac not supported).



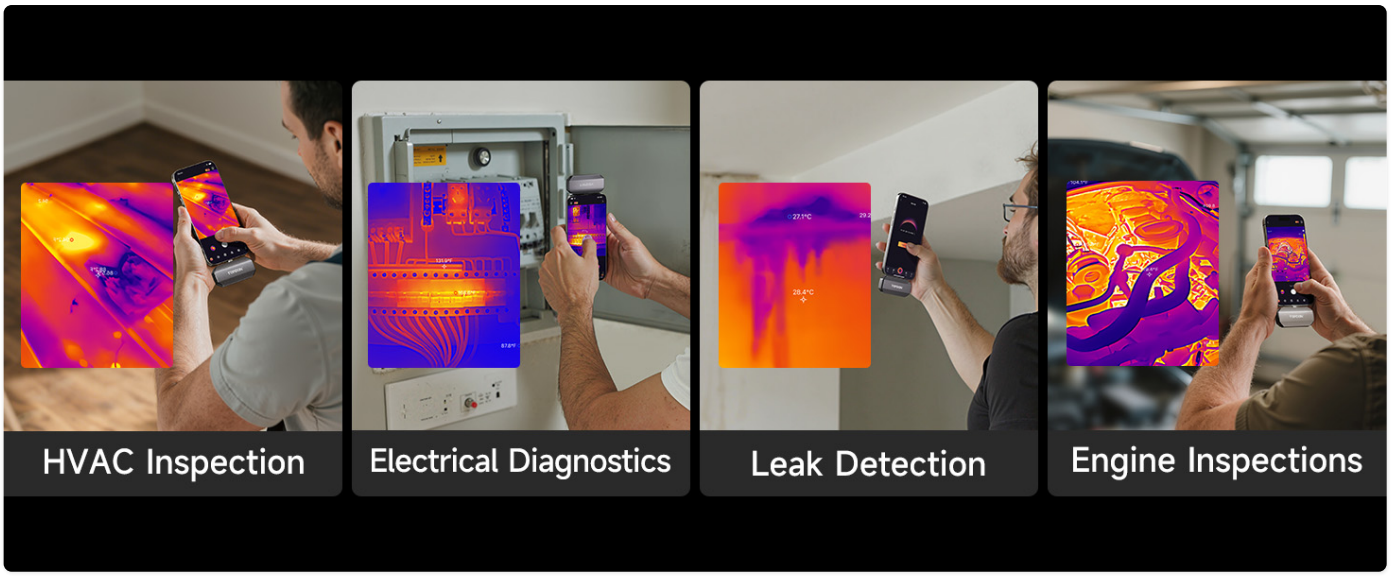
Perform advanced thermal image analysis using TopView software on a Windows PC.

Rotatable Design

The thermal camera features a rotatable design, allowing for flexible positioning and easier capture of thermal images from various angles without needing to reposition your connected device.

AI Detection and Guided Home Inspection

The TopInfrared app includes AI Detection features and a built-in step-by-step home inspection guide to assist users in identifying potential issues such as pests, wall leakage, HVAC system problems, and door/window insulation deficiencies.

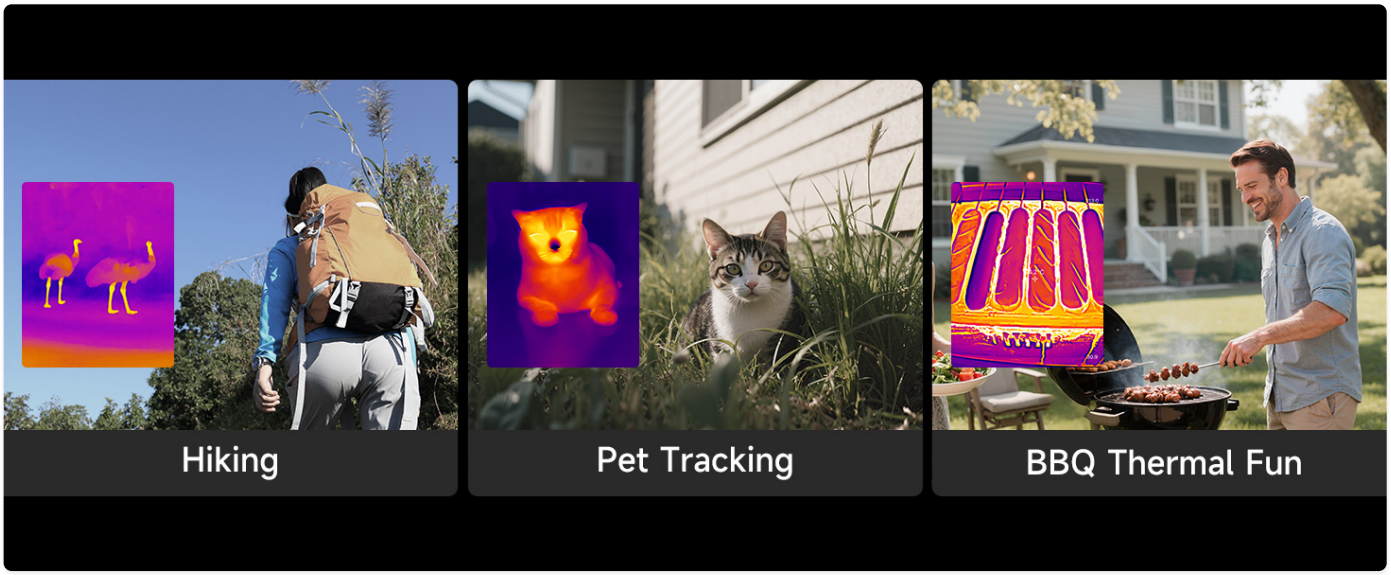


The app provides AI-assisted guidance for home inspections, simplifying fault detection.

Applications

The TC002C Duo is a versatile tool suitable for a wide range of professional and personal applications:

- **Home Inspections:** Identify insulation issues, drafts, and moisture problems.
- **HVAC Technicians:** Diagnose heating and cooling system inefficiencies.
- **Electricians:** Detect overheating circuits, loose connections, and electrical faults.
- **Automotive Technicians:** Pinpoint engine hot spots, cooling system issues, and brake temperature differences.
- **Leak Detection:** Locate hidden water leaks by observing temperature differentials.
- **Outdoor Activities:** Useful for night hiking, pet tracking, and observing wildlife.
- **General Use:** Monitor BBQ temperatures, check appliance performance, and more.



Explore various applications, from outdoor adventures to home maintenance.

Maintenance

To ensure optimal performance and longevity of your TOPDON TC002C Duo Thermal Camera:

- **Cleaning:** Use the provided cleaning cloth to gently wipe the lens and body of the device. Avoid abrasive materials

or harsh chemicals.

- **Storage:** Store the device in its protective carrying bag when not in use to prevent dust and damage.
- **Environmental Conditions:** Avoid exposing the device to extreme temperatures, humidity, or direct sunlight for extended periods.

Troubleshooting

If you encounter issues with your TC002C Duo, consider the following:

- **Device Not Detected:** Ensure the thermal camera is securely plugged into your device's USB-C port. If using an adapter cable, ensure it is correctly connected.
- **App Malfunction:** Close and restart the TopInfrared app. If the issue persists, try reinstalling the app.
- **Inaccurate Readings:** Verify that the emissivity settings in the app are appropriate for the surface you are measuring. Ensure the lens is clean.
- **Compatibility:** Confirm your device is compatible with the TC002C Duo (USB-C iOS/Android/Windows; not Mac or Android 16 temporarily).

For further assistance, please refer to the Warranty & Support section.

Specifications

Feature	Specification
IR Resolution	256 x 192
TISR Resolution	512 x 384
Temperature Range	-4°F to 1022°F (-20°C to 550°C)
Temperature Accuracy	±2°C or 2%
Thermal Sensitivity	<40mK
Refresh Rate	25Hz
Item Weight	1.1 oz (30g)
Dimensions	2.8” x 1.7” x 0.55” (71x42x14mm)

Warranty & Support

TOPDON is committed to providing excellent customer service and product support:

- **1-Year Guarantee:** Your device is covered by a 1-year guarantee from the date of purchase.
- **Lifetime Product Assistance:** Enjoy lifetime technical support for your TOPDON product.
- **US-Based Pro Hotline Assistance:** Access 24/7 customer service and professional support from our US-based team.

For support, please visit the official TOPDON website or contact our customer service hotline.



TOPDON offers comprehensive support for its products, including warranty and technical assistance.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question