

## Thermal Master P3

# Thermal Master P3 Thermal Camera User Manual

Model: P3

## 1. INTRODUCTION

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The Thermal Master P3 is a versatile thermal imaging camera designed for a wide range of applications, including PCB inspection, industrial maintenance, and home inspections. This compact device connects directly to your iOS or Android smartphone, transforming it into a powerful thermal analysis tool. Featuring an 8mm manual macro lens, 512x384 X<sup>3</sup>IR resolution, and a broad temperature detection range, the P3 provides precise and detailed thermal insights. This manual will guide you through the setup, operation, and maintenance of your Thermal Master P3.



Figure 1: Thermal Master P3 Thermal Camera

## 2. PACKAGE CONTENTS

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Please verify that all items listed below are included in your package:

- Thermal Master P3 Thermal Camera ×1
- EVA Case ×1
- 50cm Extensive Cable ×1
- USB C to Lightning Adapter ×1
- User Manual (this document)
- Warranty Card
- Quick Start Guide



Figure 2: Thermal Master P3 Package Contents


## 3. SETUP AND CONNECTION

### 3.1 App Installation

The Thermal Master P3 requires the **Temp Master** application to function. Download the app from your device's respective app store:

- **For iOS devices:** Search for 'Temp Master' on the Apple App Store.
- **For Android devices:** Search for 'Temp Master' on the Google Play Store.


*Note: For Android devices, ensure that 'OTG' (On-The-Go) is enabled in your phone's settings if the app does not respond upon connection. On most phones, OTG is enabled by default.*




## Temp Master APP

- No Login Required
- Apple MFI Certified

Download on the



**App Store**



**Google Play**

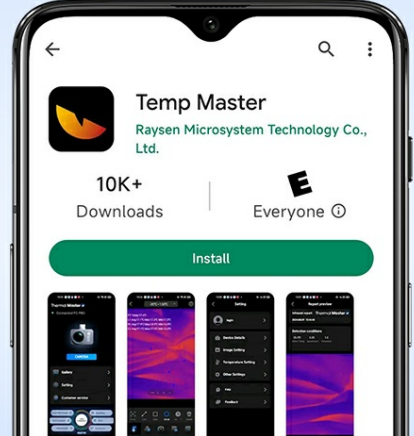


Figure 3: Temp Master App Download

### 3.2 Connecting the P3

The Thermal Master P3 is designed for wide compatibility:

- **For Android and newer iPhones (iPhone 15/16 series):** Connect the P3 directly to your device's native Type-C port.
- **For other iOS devices (iPhone 14/13/12/11/XR/X/8 series):** Use the included Lightning adapter to connect the P3 to your device.
- **For Windows devices or inspecting tight spaces:** Utilize the 19-inch extension cable for flexible connection.

# Wider Compatibility



## Type-C Receiver



For iPhone 16/15 series,  
Samsung, Google, Motorola, etc

## Type-C to Lightning Adapter



For iPhone 14/13/12/11/XR/X/8 series

## Type-C Extension Cord



For iPad, Android Tablets,  
Windows devices

**Note:** Please download the special app version from the official store for the Android 10.

Figure 4: Device Compatibility and Connection Methods

## 4. OPERATING YOUR THERMAL MASTER P3

### 4.1 Basic Operation

The P3 operates on a plug-and-play basis, drawing power directly from your connected device. No internal battery or charging is required. Simply connect the device, open the Temp Master app, and begin your thermal analysis.

The 8mm manual focus lens allows you to adjust the focus for clear thermal images, from macro inspections of small components to mid-range scanning up to 80 meters.

<div>What's the Differences</div> <div></div>	Product Comparison		
	Macro Function	√	×
	Manual Focus Lens	√	×
	Super Resolution	512x384	320x240
	Frame Rate	25hz	9hz
	Temp Range	-4°F to 1112°F	-4°F to 752°F
	Accuracy	±2%	±5%
	NETD	≤35mK	≤70mK
	Compatible with	iOS and Android	iOS or Android
	Usage Time	6h	1h

Figure 5: Manual Focus and Range Capabilities

4.2 Thermal Imaging Features

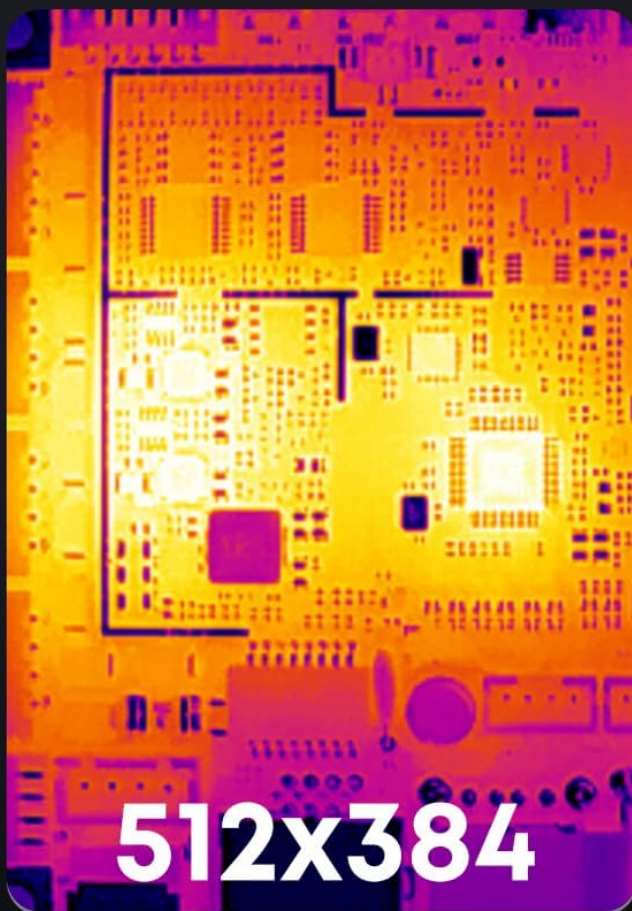
Resolution and Sensitivity

The P3 utilizes RazorX and X³ imaging algorithms to achieve a 512x384 resolution from a 256x192 sensor. Its high-sensitivity core detects temperature variations as small as 0.035°C, enabling the detection of 1mA current leaks.

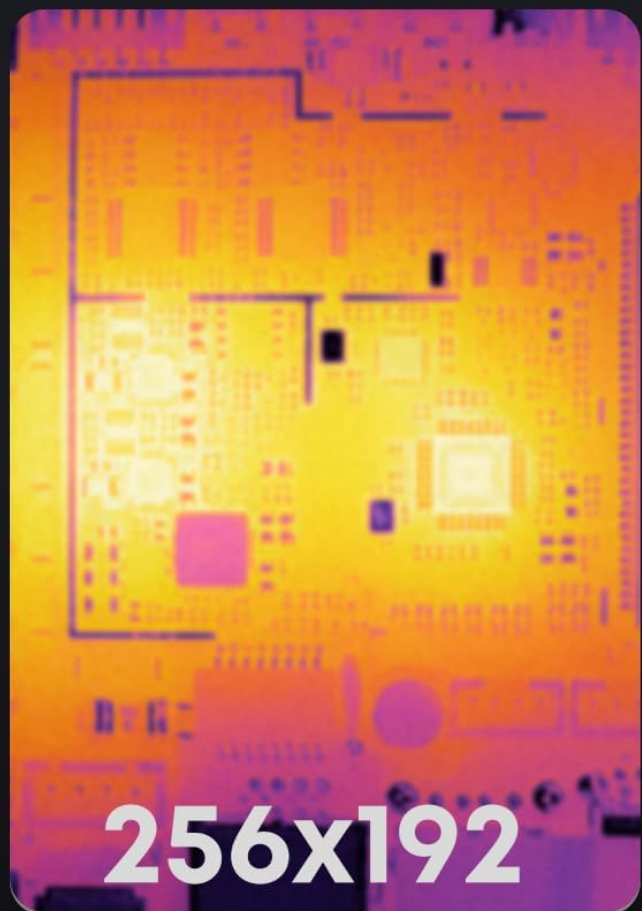


# Detecs 1mA PCB Leakage

An 8mm macro lens for close-up inspection, 0.035°C thermal sensitivity, and X<sup>3</sup> algorithm deliver 512×384 resolution imaging.



X<sup>3</sup> IR ☒ on



X<sup>3</sup> IR ☐ off

Figure 6: X<sup>3</sup>IR Resolution Comparison

## Temperature Measurement

The P3 offers a temperature detection range of -4°F to 1112°F (-20°C to 600°C) with an accuracy of ±3.6°F (±2°C) using IQ+ Precision Temp Measurement. The app provides various measurement modes, including points, lines, and areas, allowing for detailed analysis. You can also fine-tune measurements by adjusting environmental factors like emissivity, ambient temperature, and measurement distance.

# Precision Temp Measurement

Locate electrical hotspots, insulation gaps and water leaks with certainty.

**-4°F to 1112°F**

Temperature  
Range

**±3.6°F**

Accuracy

**0.035°C**

Thermal  
Sensitivity

*Figure 7: Precision Temperature Measurement*

## Visual Customization

The Temp Master app offers 12 professional color palettes to visualize temperature distribution clearly. The Isotherm feature helps you quickly identify specific temperature ranges for fast diagnostics.





Figure 8: 12-Color Palette Options

## Zoom and Refresh Rate

Benefit from 15x digital zoom to bring distant targets into clear view. A 25Hz refresh rate ensures smooth, real-time thermal imaging.

## Advanced Features

The Temp Master app includes intelligent features such as high/low temperature alarms, picture-in-picture mode, and automatic temperature point tracking. It also supports a 3D Thermal View, which helps turn hot spots into precise locations for targeted repairs.



Figure 9: 3D Thermal View

## 4.3 Data Analysis and Reporting

The Temp Master app provides free professional data analysis tools. You can quickly analyze captured photos and videos, and generate detailed reports in minutes. This includes 2D and 3D editing capabilities, and PC compatibility for comprehensive analysis.





Figure 10: Free Professional Data Analysis

*Video 1: User Guide for Thermal Master P3 - This video provides a visual walkthrough of the Thermal Master P3's features and app interface, demonstrating its ease of use and various functionalities.*

*Video 2: Thermal Master P3, the PCB Master - This video showcases the Thermal Master P3's capabilities specifically for PCB inspection, highlighting its precision and utility in identifying minute current leakages and thermal anomalies on circuit boards.*

## 5. CARE AND MAINTENANCE

To ensure the longevity and optimal performance of your Thermal Master P3, follow these maintenance guidelines:

- **Cleaning:** Gently wipe the lens and device body with a soft, dry, lint-free cloth. Avoid using abrasive cleaners or solvents.
- **Storage:** Store the P3 in its provided EVA case when not in use to protect it from dust, moisture, and physical damage.
- **Handling:** Handle the device with care. Avoid dropping it or exposing it to extreme temperatures or humidity.



Figure 11: Built to Last - Durability Testing

## 6. TROUBLESHOOTING

Here are some common issues and their solutions:

- **Q1: Why is the Temp Master app not responding when plugged in?**  
A: a) Verify that 'OTG' is enabled in your phone's Settings. On most phones, OTG is enabled by default and ready to use. b) Install the Temp Master app and grant all required permissions. c) Reconnect your item. If issues persist, contact our after-sales team.

- **Q2: What should I do in the event of a blurry screen?**

A: Refresh the images by tapping the Shutter icon.

- **Q3: Can the camera detect objects under water, outside windows?**

A: No. Thermal imaging detects surface-level heat, which is blocked or reflected by water, glass, and fabrics.

- **Q4: Why do I always hear a 'click' sound?**

A: This is the shutter sound of the thermal camera to maintain image clarity. You can temporarily disable it by following:  
Setting → Image Setting → Automatic shutter.



Figure 12: Common Troubleshooting Questions

## 7. TECHNICAL SPECIFICATIONS

Feature	Specification
Model	P3
Manufacturer	Thermal Master
Resolution	512×384 X <sup>3</sup> IR (from 256×192 sensor)
Thermal Sensitivity (NETD)	0.035°C (35mk)
Temperature Range	-4°F to 1112°F (-20°C to 600°C)
Accuracy	±3.6°F (±2%)
Lens	8mm Macro & Manual Focus Lens
Field of View	40°x30°
Digital Zoom	15x
Refresh Rate	25Hz
Compatibility	iOS (via Type-C or Lightning adapter), Android (via Type-C), Windows (via extension cable)
Power Consumption	0.32W (5-8 hours usage from device)
Item Weight	10.5 ounces
Package Dimensions	5.91 x 4.33 x 2.13 inches

## 8. WARRANTY AND SUPPORT

Thermal Master is committed to providing reliable products and excellent customer service:

- **Free Returns:** Enjoy 30-day free returns.
- **Replacement:** No-hassle replacement for any quality problem within 2 years.
- **Service & Support:** Benefit from lifetime service and professional technical support.

For further assistance or inquiries, please refer to the contact information provided on your warranty card or visit the official Thermal Master website.

### Only Reliability & Service Matter

Free Returns

30 Days

No hassle replacement for any quality problem

2 Years

Professional technical support and solutions





Lifetime Service

Figure 13: Thermal Master Reliability & Service

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Related Documents - P3

<div></div>	<div><a href="#">Thermal Master DV2 Quick Start Guide</a></div> <div>A concise quick start guide for the Thermal Master DV2, covering product introduction, precautions, services, and warranty information.</div>
<div></div>	<div><a href="#">Thermal Master P Series Quick User Guide</a></div> <div>Concise guide to using Thermal Master P Series thermal cameras, covering safety, setup, features, specifications, and troubleshooting.</div>

 <p>Titan Pad Plus User Manual</p> <p>Thermal Master Technology Co., Ltd.</p>	<p><a href="#">Thermal Master Titan Pad Plus User Manual</a></p> <p>User manual for the Thermal Master Titan Pad Plus, detailing its product overview, specifications, software functions, display settings, precautions, FCC compliance, CE compliance, and service information.</p>
 <p>Řada P STRUČNÝ NÁVOD K POUŽITÍ</p> <p>Thermal Master</p>	<p><a href="#">Thermal Master Řada P: Stručný návod k použití a specifikace</a></p> <p>Oficiální stručný návod k použití pro termokamery Thermal Master Řady P (P1, P2L, P2pro, P3, P4). Informace o instalaci, funkcích softwaru, specifikacích a řešení problémů.</p>
 <p>P3 QUICK START GUIDE</p> <p>Thermal Master</p>	<p><a href="#">Thermal Master P3 Quick Start Guide</a></p> <p>This quick start guide provides essential information for setting up and using the Thermal Master P3 thermal imaging camera, including product overview, specifications, software functions, and troubleshooting tips.</p>
 <p>Automotive AI Thermal Master</p> <p>Detect. Life. Deer Vehicle Collision Prevention</p>	<p><a href="#">Thermal Master NV300 Max: Automotive AI Thermal Master User Manual and Guide</a></p> <p>Comprehensive guide for the Thermal Master NV300 Max, an AI-powered dual-spectrum automotive night vision system. Covers product features, installation, usage, performance parameters, and safety information.</p>