PRECISION THERMAL ANALYSIS
T500-SERIES PROFESSIONAL THERMAL IMAGING CAMERA
Ideal for R&D/Science Applications

FLIR T530/T540 Professional Thermal Imaging Cameras provide the resolution, crisp imagery, and temperature accuracy needed to help researchers and engineers improve product design, increase efficiency, or gain insight into a target’s thermal behavior. With more than 160,000 temperature measurement points, the exacting detail of Macro Mode, and useful features such as 1-Touch Level/Span, the FLIR T500-Series will help you quickly identify hot spots and potential design flaws.

With FLIR T530/T540 cameras, you can:

• **Deepen your understanding of products and processes** with Macro Mode measurement down to 71 µm per pixel spot size (T540).

• **Measure targets comfortably in any lab environment**, thanks to its streamlined form-factor and 180° rotating optical block.

• **Reduce test times and increase efficiency** through rapid camera setup and advanced analysis tools.

• **Improve data sharing** and build client trust with vivid imagery that even non-experts can interpret.
EXPANDABLE AND MODULAR

Record images with up to 464 x 348 true native resolution or enhance to more than 645,000 pixels through FLIR UltraMax® for the most accurate temperature measurements. Activate Macro Mode to measure small components down to 71 µm (T540) or down to 50 µm with the macro lens.

Multiple Targets, One Solution
Not every target is large enough or close enough for proper measurement with a single lens. That’s why FLIR designed the T500-Series with interchangeable 24°, 42°, and 14° lenses as well as a macro lens (available in 2018) – so you can use the same camera for every target you survey.

The camera auto-calibrates with each new lens to ensure it produces high-quality images and precise thermal measurements.
FLIR T500-Series
T530 | T540

Two programmable buttons

Speaker plays back voice annotation

Vibrant, 4” optically-bonded PCAP touchscreen

180° rotating optical block for imaging at multiple angles

Scratch-resistant Dragontrail™ glass

Li-ion battery for extended use times

Mic for voice annotation
FLIR T530/T540 cameras are packed with performance features that speed up testing and deliver precision results: an ergonomic design, built-in macro mode, razor-sharp macro lens*, and analysis software that’s a snap to learn.

*not AutoCal-compatible, available in 2018
With the sensitivity to detect temperature differences of less than 0.03°C, the FLIR T530/T540 allow you to find hidden design flaws and track small thermal gradients. These cameras offer a wide temperature range for quantifying heat generation and thermal dissipation up to 1500°C (T540). Measurements are accurate to ±2%, promoting quality assurance and factory acceptance of printed circuit boards and other products.

Optimized for Demanding Lab Environments
- Bright, 4” display with a 160° viewing angle
- 180° optical block rotation for imaging a range of target sizes
- Intuitive folder and naming structure, so images are easy to find
- Streams data directly to computer over Wi-Fi or USB
- Enhanced data collection, analysis, and sharing with FLIR Tools™ or FLIR ReseachIR software solutions
Specifications

### Features By Camera

<table>
<thead>
<tr>
<th>Feature</th>
<th>T530</th>
<th>T540</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR Resolution</td>
<td>320 x 240 (76,800 pixels)</td>
<td>464 x 348 (161,472 pixels)</td>
</tr>
<tr>
<td>UltraMax® Resolution</td>
<td>307,200 effective pixels</td>
<td>645,888 effective pixels</td>
</tr>
<tr>
<td>Object Temperature Range</td>
<td>-20°C to 120°C (-4°F to 248°F)</td>
<td>-20°C to 120°C (-4°F to 248°F)</td>
</tr>
<tr>
<td>Optional Calibration:</td>
<td>300°C to 1200°C (572°F to 2192°F)</td>
<td>300°C to 1500°C (572°F to 2732°F)</td>
</tr>
<tr>
<td>Macro Mode</td>
<td>24° lens / 103 µm effective spotsize</td>
<td>24° lens / 71 µm effective spotsize</td>
</tr>
<tr>
<td>Digital Zoom</td>
<td>1-4x continuous</td>
<td>1-6x continuous</td>
</tr>
</tbody>
</table>

### Common Features

- Detector Type and Pitch: Uncooled microbolometer, 17 µm
- Thermal Sensitivity/NETD: <30 mK @ 30°C (42° lens)
- Spectral Range: 7.5 - 14.0 µm
- Image Frequency: 30 Hz
- Programmable Buttons: 2
- Lens Identification: Automatic
- F-Number: f/1.1 (42° lens), f/1.3 (24° lens), f/1.5 (14° lens)
- Focus: Continuous, one-shot with laser distance meter (LDM), one-shot contrast, manual
- Minimum Focus Distance: 42° lens: 0.15 m; 24° lens: 0.15 m; optional Macro Mode 14° lens: 1.0 m
- Programmable Buttons: 2

### Image Presentation and Modes

- Display: 4”, 640 x 480 pixel touchscreen LCD with auto-rotation
- Digital Camera: 5 MP, with built-in LED photo/video lamp
- Color Palettes: Iron, Gray, Rainbow, Arctic, Lava, Rainbow HC
- Image Modes: Infrared, visual, MSX®, Picture-in-Picture, optional Macro Mode

### Measurement and Analysis

- Accuracy: ±2°C (+3.6°F) or ±2% of reading
- Spotmeter and Area: 3 ea. in live mode
- Measurement Presets: No measurement, center spot, hot spot, cold spot, User Preset 1, User Preset 2
- Laser Pointer: Yes
- Laser Distance Meter: Yes, dedicated button

### Annotations

- Voice: 60 sec. recording added to still images or video via built-in mic (has speaker) or via Bluetooth
- Text: Predefined list or touchscreen keyboard
- Image Sketch: From touchscreen, on infrared image only
- Distance, Area Measurement: Yes, calculates area inside measurement box in m² or ft²
- GPS: Yes; automatic GPS image tagging
- METERLINK®: Yes

### Image Storage

- Storage Media: Removable SD card
- Image File Format: Standard JPEG with measurement data included
- Time Lapse (Infrared): 10 sec to 24 hrs

### Video Recording and Streaming

- Radiometric IR Video Recording: Real-time radiometric recording (.csq)
- Non-Radiometric IR or Visual Video: H.264 to memory card
- Radiometric IR Video Streaming: Yes, over UVC or Wi-Fi
- Non-Radiometric IR Video Streaming: H.264 or MPEG-4 over Wi-Fi, MJPEG over UVC or Wi-Fi
- Communication Interfaces: USB 2.0, Bluetooth, Wi-Fi
- Video Out: DisplayPort over USB Type-C

### Additional Data

- Battery Type: Li-ion battery, charged in camera or on separate charger
- Battery Operating Time: Approx. 4 hours at 25°C (77°F) ambient temperature and typical use
- Operating Temperature Range: -15°C to 50°C (5°F to 122°F)
- Storage Temperature Range: -40°C to 70°C (-40°F to 158°F)
- Shock/Vibration/Encapsulation; Safety: 25 g / IEC 60068-2-27, 2 g / IEC 60068-2-6 / IP 54; EN/UL/CSA/PSE 60950-1
- Weight/Dimensions w/o Lens: 1.3 kg (2.9 lbs), 140 x 201 x 84 mm (5.5 x 7.9 x 3.3 in)
- Box Contents: Infrared camera with lens, 2 batteries, battery charger, hand strap, hard transport case, lanyards, front lens cap, rear lens cap, power supplies, printed documentation, SD card (8 GB), cables (US 2.0 A to USB Type-C, USB Type-C to HDMI, USB Type-C to USB Type-C)

Specifications are subject to change without notice. For the most up-to-date specs, go to www.flir.com

---

**T500-Series cameras are backed by FLIR’s industry-leading warranty**

- 2 years: Full protection, parts, labor
- 5 years: Battery
- 10 years: Detector

LEARN MORE ABOUT THESE T500-SERIES CAMERAS AT WWW.FLIR.COM/T500SCIENCE
FLIR offers education and training programs at its production facilities, regionally, or at your location. FLIR assists beginners to seasoned professionals in the following areas:

- On-line Training Courses
- Infrared Thermography for Research and Development
- Advanced Radiometry
- Thermography R&D Application Webinars
- Infrared Technology & Application Seminars
- Customer Site Consultation Services

The Infrared Training Center
The mission of the Infrared Training Center is to make our customers and partners successful by enhancing their knowledge of IR technology, thermal imaging products, and relevant applications.

At ITC, you can take initial training courses in thermography, or receive more advanced training specific to research and development. All of our instructors are experienced thermal imaging specialists who have practical experience with numerous applications.

Thermography Certification Training
Level I certifies that you know how a thermal imager works and how to use it. Level II cranks your credibility up a notch with more in-depth concepts and intensive labs. Level III asserts that you have knowledge and skills to administer your company’s thermography program. These certifications offer strong validation to support the work you do as a thermographer.

Mobile Training Units and on-site training at your facility are encouraged if you would like to certify a group of 10 or more. For a complete list and schedule of courses and more information, visit www.infraredtraining.com.