



# FLIR T450sc

## Compact Infrared Cameras for Research and Science Applications

Portable, ergonomic, and easy-to-use, FLIR's T450sc infrared camera provides excellent infrared image quality at an affordable cost and are packed with innovative features that make them perfect choices for your research and scientific needs. The T450sc camera offers:

### **RICH FEATURE SET**

*Infrared image resolution of  $320 \times 240$  along with auto or manual focus options, up to 8x continuous digital zoom, and optional interchangeable infrared lenses allow you to get the information your project demands.*

### **INTEGRATED VISUAL CAMERA**

*Capture visible-light images at the same time you capture your thermal image with a built-in 3.1 megapixel digital camera that includes a target illuminator for low light situations.*

### **AUTO HOT/COLD SPOT & AUDIBLE/VISUAL ALARMS**

*Detect high, low, and interval temperatures on the thermal image quickly and efficiently using FLIR's advanced in camera algorithms. Create custom temperature triggers to sound audible or show visible alarms for desired targets*

### **ON-CAMERA RADIOMETRIC RECORDING**

*Real-time temperature calibrated movie recording at 30Hz to SD card that can be replayed on the camera or exported to ResearchIR 4.0 for playback, analysis and data sharing.*

### **ON-CAMERA MEASUREMENT TOOLS**

*On-screen emissivity tables, up to 5 temperature measurement spots, and Delta T functionality mean you can quickly acquire and easily compare temperature data.*

### **MSX® ENHANCEMENT AND PICTURE-IN-PICTURE**

*Merge or overlay visual and infrared images to make identification and interpretation of infrared images easy and intuitive.*

### **ERGONOMIC DESIGN**

*3.5" LCD touchscreen brings new easy-to-navigate interface and user comfort to a new level. Optics head and display screen are independently rotatable for optimum viewing.*

### **AUTO ORIENTATION**

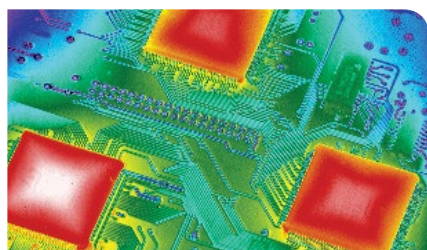
*Keeps onscreen measurement data upright for easier reading in vertical or horizontal framing.*

### **MAXIMUM CONNECTIVITY**

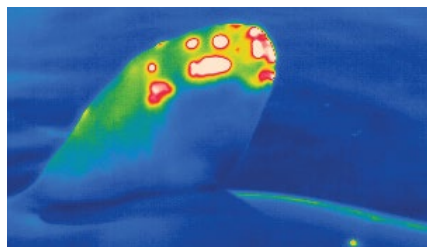
*Store thousands of images to a standard removable SD Memory Card or output through standard video and USB outputs. Create visual and infrared non-radiometric MPEG-4 video files.*

### **RESEARCHIR DATA ACQUISITION AND ANALYSIS SOFTWARE** (included)

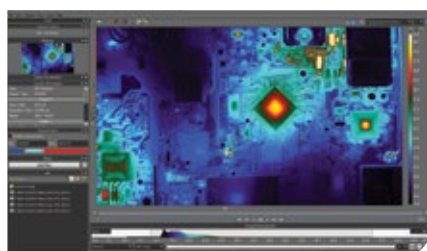
*Specifically developed for use in research and scientific environments, FLIR ResearchIR allows T450sc users to remotely control their camera, record movies & snapshots, and conduct detailed thermal analysis in "live" or "playback" mode.*



caption goes here



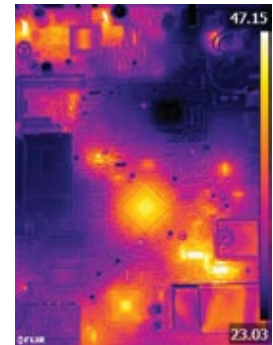
Whale Fin



ResearchIR Data Acquisition and Analysis Software

## Imaging Specifications

| Detector                             | T450sc  |
|--------------------------------------|---|
| Detector Type                        | Uncooled Microbolometer   |
| Spectral Range                       | 7.5 – 13.0 $\mu\text{m}$  |
| Resolution                           | 320 × 240   |
| Detector Pitch                       | 25 $\mu\text{m}$  |
| NETD                                 | <30 mK  |
| Electronics / Imaging                |   |
| Time Constant                        | <12 ms  |
| Frame Rate                           | 60 Hz   |
| Dynamic Range                        | 14-bit  |
| Digital Data Streaming               | Real-time Radiometric = USB to PC<br>Real-time Non-radiometric = MPEG via USB to PC             |
| On-Camera Radiometric Recording      | Real-time Temperature Calibrated<br>Movie Recording at 30Hz to SD card                          |
| Analog Video                         | Composite Video / RCA connector   |
| Command & Control                    | USB, WiFi   |
| Measurement                          |   |
| Standard Temperature Range           | -20°C to 1500°C (-4°F to 2732°F)  |
| Accuracy                             | ±1°C or ±1% (limited range)   |
| Optics                               |   |
| Camera f/#                           | f/1.3   |
| Integrated Lens                      | 18 mm (25°)   |
| Available Lenses                     | 76 mm (6°), 30 mm (15°), 10 mm (45°), 4 mm (90°)  |
| Close-up Lenses / Microscopes        | Close-up (25 $\mu\text{m}$ ), (50 $\mu\text{m}$ ), (100 $\mu\text{m}$ )                         |
| Focus                                | Automatic or Manual (Motorized)   |
| Image Presentation                   |   |
| On-Camera Display                    | Touch Screen/3.5 in LCD Display (320 × 240)   |
| Auto-Orientation                     | Keeps Onscreen Temperature Data Upright in Portrait or Landscape                                |
| Automatic Gain Control               | Manual, Linear, Histogram, DDE  |
| Image Analysis                       | Spot Meters, Areas, Auto Hot / Cold Detection, Difference Temp, Isotherms, Alarms, Line Profile |
| Image Annotations                    | 60 Sec Voice, Text, 4 x Markers, Sketch   |
| Zoom                                 | 8× Digital Continuous   |
| Visible Image                        | 3.1 Megapixel from Integrated Visible Camera  |
| MSX® Enhancement/ Picture in Picture | Adds Visible Detail to Thermal/<br>P-i-P Overlays Thermal on Visible Image                      |
| General                              |   |
| 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)  |
| Encapsulation                        | IP 54 (IEC 60529)   |
| Bump / Vibration                     | 25 g (IEC 60068-2-29) / 2 g (IEC 60068-2-6)   |
| Power                                | AC Adapter 90-260 VAC, 50/60 Hz<br>or 12 V from a Vehicle                                       |
| Battery System                       | Li Ion, 4 Hours Operating Time  |
| Weight w/ Battery                    | 0.88 kg (1.94 lb)   |
| Size (L × W × H)                     | 106 × 201 × 125 mm (4.2 × 7.9 × 4.9 in)   |
| Mounting                             | ¼"-20   |



Auto-Orientation

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NASDAQ: FLIR

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