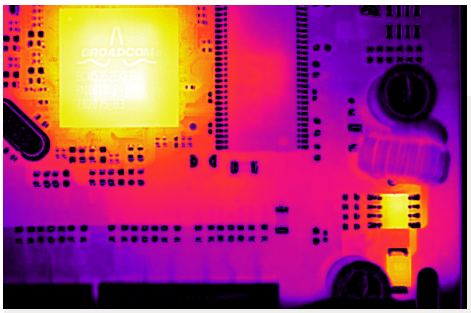
High-Performance Science Handheld Infrared Camera

FLIR T800-Series

FLIR T800-Series handheld infrared cameras provide ultimate flexibility and portability for research and science applications in multiple industries including electronics, aerospace, green energy, university research, military testing, and government labs. High-performance features including FLIR UltraMax®, MSX® (Multi-spectral Dynamic Imaging), and optional Macro Mode provide exceptional image quality and unmatched measurement capabilities. Robust on-board analysis and the ability to record fully radiometric movie files to a removable SD card allow users to take meaningful thermal data in nearly any environment or testing scenario. Users can expand data analysis capabilities with powerful FLIR Research Studio* software running on a PC, Mac, or Linux. With a streamlined, intuitive user interface and unique feature set, users at all levels can effortlessly record and evaluate thermal data from multiple FLIR cameras and recorded sources simultaneously.

flir.com/T-Series_Science

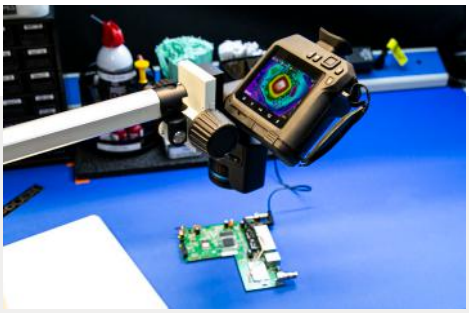


SUPERIOR MEASUREMENT CAPABILITIES

Accurately measure a wide range of temperatures and maximize the number of pixels on targets regardless of size or distance from the camera

- Acquire reliable temperature data with exceptional measurement accuracy†
- Produce crisp, vibrant imagery with FLIR MSX, which extracts scene details from the built-in visual camera and embosses them onto the full thermal image; and UltraMax, which enhances images up to 1.2 MP thermal resolution
- Perform wide-angle and macro imaging to measure small areas accurately without switching lenses using FLIR Macro Mode; or resolve temperatures on the smallest components with an optional 2x macro lens

†Accuracy as good as ±1% / ±1% with T865, see specs for more details



ULTIMATE FLEXIBILITY AND PORTABILITY

Collect meaningful thermal data in nearly any situation with flexible connectivity - whether the camera is handheld or mounted

- Record radiometric images and movie files directly to a removable SD-card (without the need to be connected to a PC) using on-board CSQ file recording
- Stream fully radiometric data to FLIR Research Studio* software via USB-C, and analyze and share thermal data easily
- Connect wirelessly to mobile devices using built-in Wi-Fi

SAVE TIME AND EFFORT

Eliminate the need for complex test set-ups when performing thermal analysis and start testing sooner

- Acquire compelling thermal data using the intuitive interface and icon-based touchscreen
- Record both thermal and visible images as well as infrared movie sequences
- Reduce the time and effort needed to learn new programs and start testing quicker with FLIR Research Studio's intuitive software platform

*A free 30-day trial of FLIR Research Studio software can be downloaded from the FLIR Technical Support Center (https://flir.custhelp.com/). Please contact a FLIR representative for pricing and purchase options.

SPECIFICATIONS

Imaging and Optical Data	T840	T865
IR Resolution	464 × 348 (161,472 pixels, 645,888 with UltraMax®)	640 × 480 (307,200 pixels, 1,228,800 with UltraMax®)
Detector Pitch	17 µm	12 µm
Object Temperature Range	-20°C to 120°C (-4°F to 248°F); 0°C to 650°C (32°F to 1202°F); 300°C to 1500°C (572°F to 2732°F)	-40°C to 120°C (-40°F to 248°F); 0°C to 650°C (32°F to 1202°F); 300°C to 2000°C (572°F to 3632°F)
Digital Zoom	1-6× continuous	1-8× continuous
Macro Mode (24° lens option)	71 µm min. focus distance	50 µm at near focus distance of 60 mm
Spotmeter and Area	3 each in live mode	10 and 5 in live mode
Accuracy	±2°C (±3.6°F): -20°C to 100°C (-4°F to 212°F); ±2%: 100°C to 650°C (212°F to 1202°F), 300°C to 1500°C (572°F to 2732°F)	±1°C (±1.8°F): 5°C to 100°C (41°F to 212°F); ±1%: 100°F to 120°C (212°F to 248°F); ±2°C (±3.6°F): -40°C to 100°C (-40°F to 212°F); ±2%: 100°C to 650°C (212°F to 1202°F), 300°C to 2000°C (572°F to 3632°F); ±3%: 1800°C to 2000°C (3272°F to 3632°F) with 42° lens
Detector Data		
Detector Type and Pitch	Uncooled microbolometer	
Thermal Sensitivity/ NETD	<30 mK @ 30°C (42° lens)	
Spectral Range	7.5 to 14.0 µm	
Image Frequency	30 Hz	
Lens Identification	Automatic	
F-number	f/1.1 (42° lens), f/1.3 (24° lens), f/1.5 (14° lens), f/1.35 (6° lens)	
Focus	Continuous with laser distance meter (LDM), One-shot LDM, One-shot contrast, manual	
Minimum Focus Distance	42° lens: 0.15 m/0.49 ft, 24° lens: 0.15 m/0.49 ft, 14° lens: 1.0 m/3.28 ft, 6° lens: 5.0 m/16.4 ft, 2x macro lens: 18 mm/0.059 ft	
Programmable Buttons	2	
Image Presentation		
Display	4-inch, 640 × 480 pixel touchscreen LCD with auto-rotation	
Digital Camera	5 MP with built-in LED photo/video lamp	
Color Palettes	Iron, Rainbow, Rainbow HC, White hot, Black hot, Arctic, Lava	
Image Modes	Infrared, visual, MSX®, Picture-in-picture	
Picture-in-Picture	Resizable and movable	
UltraMax®	Activated in menu and processed in FLIR reporting software	
Measurement and Analysis		
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, displays distance on-screen	
On-screen Area Measurement	Yes; calculates area inside measurement box in m² or ft²	
Compatible Software	FLIR Research Studio, MathWorks® MATLAB® and Simulink®, FLIR Thermal Studio, FLIR Atlas SDK	

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	Infrared images only, from touchscreen
GPS	Automatic image tagging
METERLiNK®	Yes; connects to METERLiNK-enabled FLIR meters
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	Compressed, over UVC
Non-radiometric IR Video Streaming	H.264, MPEG-4 over Wi-Fi; MJPEG over UVC or Wi-Fi
Communication Interfaces	USB 2.0, Bluetooth, Wi-Fi, DisplayPort
Video Out	DisplayPort
Additional Data	
Languages	21
Battery Type	Li-ion battery, charged in camera or on separate charger
Battery Operation	Approximately 4 hours at 25°C (77°F)
Operating Temperature Range	-15°C to 50°C (5°F to 122°F)
Shock/Vibration/ Encapsulation	25 g (IEC 60068-2-27) / 2 g (IEC 60068-2-6) / IP54
Safety	EN/UL/CSA/PSE 60950-1
Weight (including battery)	1.4 kg (3.1 lb)
Size (l × w × h, lens vertical)	164.3 × 201.3 × 84.1 mm (6.5 × 7.9 × 3.3 in)
Box Contents	
Package Contents	Infrared camera with lens, small viewfinder eyecup, 2 rechargeable batteries, battery charger, hard transport case, lanyards, front lens cap, power supplies, printed documentation, SD card (8 GB), cables (USB 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

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