

FLIR INSTRUMENTS

T530

The FLIR T530 is a professional-grade thermal imaging camera featuring a 180° rotating optical block, a crisp 4-inch touchscreen LCD, and a 320 x 240 resolution infrared detector. Designed for advanced thermography in industrial, electrical, and utility applications, the T530 offers exceptional thermal sensitivity, autofocus assisted by a laser distance meter, and seamless wireless connectivity.

SPECIFICATIONS

General

Interfaces	USB Type-C (USB 2.0, DisplayPort video out, power delivery), Wi-Fi, Bluetooth
Display	4-inch touchscreen LCD, 640 x 480 pixels, auto-rotation

Physical

Power Supply	Rechargeable Li-ion battery, AC adapter 90-260 VAC (50/60 Hz)
Operating Temperature	-15°C to 50°C °C
Dimensions (W×H×D)	140 mm x 201.3 mm x 167.3 mm mm
Weight	1.3 kg (with battery and 24° lens) kg

Detector & Optical

IR Resolution	320 x 240 pixels
UltraMax Resolution	640 x 480 pixels
Spectral Range	7.5 to 14.0 μm
Thermal Sensitivity (NETD)	<30 mK @ +30°C (with 42° lens)
Detector Pitch	17 μm
Image Frequency	30 Hz
Focus Control	Continuous LDM, One-shot LDM, One-shot contrast, Manual
Digital Zoom	1x to 4x continuous
Visual Camera Resolution	5 MP
Visual Camera FOV	53° x 41°
F-Number	f/1.3 (24° lens), f/1.1 (42° lens), f/1.5 (14° lens)
Field of View (FOV) Options	24° x 18° (24° lens), 42° x 32° (42° lens), 14° x 10° (14° lens)
Spatial Resolution (IFOV)	1.31 mrad (24° lens), 2.41 mrad (42° lens), 0.75 mrad (14° lens)
Minimum Focus Distance	0.15 m (24° and 42° lenses), 1.0 m (14° lens)

Measurement & Analysis

Object Temperature Range (Low)	-20°C to 120°C
Object Temperature Range (High)	0°C to 650°C
Measurement Accuracy	±2°C or ±2% of reading
Spotmeters	3 in live mode
Area Boxes	3 in live mode
Emissivity Correction	Variable from 0.01 to 1.0, or selected from predefined materials list
Measurement Corrections	Reflected temperature, optics transmission, atmospheric transmission
Laser Distance Meter	Yes, dedicated class 2 transmitter and receiver
Laser Distance Meter Accuracy	±1.5% of measured distance
Laser Pointer	Class 2, semiconductor AlGaInP diode laser, 635 nm (red), <1 mW
Color Alarms (Isotherm)	Above, below, interval, condensation, insulation
Measurement Presets	No measurements, Center spot, Hot spot, Cold spot, User presets
Image Sketching Capability	Yes, on infrared or visual image via touchscreen

Image Presentation & Modes

Image Modes	Infrared, Visual, MSX, Picture-in-Picture, Gallery
FLIR MSX	Yes, embosses visual outlines onto full-resolution thermal image
Color Palettes	Iron, Gray, Rainbow, Arctic, Lava, Rainbow HC
Picture-in-Picture	Resizable and movable infrared area on visual image
GPS Image Tagging	Yes, automatic logging of location coordinates
Compass Heading Logging	Yes, automatic heading integration

Data Storage & Connectivity

Storage Media	Removable SD card
Image File Format	Standard radiometric JPEG with 14-bit measurement data included
Radiometric IR Video Recording	Real-time radiometric recording (.csq) to SD card
Non-Radiometric IR/Visual Video Recording	H.264 to SD card
Radiometric IR Video Streaming	Yes, over USB Type-C or Wi-Fi
Non-Radiometric IR Video Streaming	H.264 or MPEG-4 over Wi-Fi; MJPEG over UVC or Wi-Fi
Voice Annotation	60 seconds built-in microphone/speaker or via Bluetooth
Text Annotation	Predefined list or touchscreen virtual keyboard
METERLiNK Compatibility	Yes, wireless connection to compatible FLIR clamp and moisture meters

Power System

Battery Type	Rechargeable Lithium-ion battery
Battery Operating Time	Approx. 4 hours at 25°C typical use
Battery Charging Time	2.5 hours to 90% capacity using 2-bay charger
Charging Temperature Range	0°C to 45°C
AC Adapter Outputs	15 VDC, 3 A
Battery Capacity	6.4 Ah
Battery Energy	23 Wh
Battery Voltage	3.6 V

Environmental & Compliance

Storage Temperature Range	-40°C to 70°C
Relative Humidity Limits	95% relative humidity, non-condensing (IEC 60068-2-30)
IP Rating (Encapsulation)	IP 54 (IEC 60529)
Shock Resistance	25 g (IEC 60068-2-27)
Vibration Resistance	2 g (IEC 60068-2-6)
Safety Standards	EN/UL/CSA/PSE 60950-1

Physical & Ergonomics

Optical Block Rotation	180° independent rotation
Tripod Mounting Thread	UNC 1/4"-20

Detector

Detector Type	Uncooled microbolometer
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Camera Features

Built-in LED Lamp	Yes (integrated LED video/photo lamp)
Laser Classification	Class 2, 635 nm, <1 mW
Lens Calibration	Automatic (AutoCal lens recognition)

Connectivity & Communication

USB Connector Type	USB Type-C (USB 2.0 standard)
Video Output Type	DisplayPort over USB Type-C
Wi-Fi Specifications	802.11 a/b/g/n (2.4 GHz and 5 GHz)
Bluetooth Specifications	Bluetooth 4.0, BLE

Display

Display Auto-Rotation	Yes (gravitational sensor controlled)
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Image Presentation

Display Size	4 in
Display Resolution	640 × 480 pixels
Display Type	IPS touchscreen LCD
Color Palette Choices	Iron, Gray, Rainbow, Arctic, Lava, Rainbow HC

Laser Pointer

Laser Max Output	<1 mW
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Storage & File Formats

Included Storage Capacity	8 GB SD card
Voice Annotation Duration	Up to 60 s (via built-in mic/speaker or Bluetooth)

TECHNOLOGY

Uncooled Microbolometer

APPLICATIONS

Industrial thermography, electrical inspection, and predictive maintenance

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