


# FLIR T1030sc

HD THERMAL IMAGING FOR R&D APPLICATIONS

HD PERFORMANCE IN A PORTABLE,  
HANDHELD INFRARED CAMERA

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1024 x 768 HD



The World's **Sixth Sense**™

# INTRODUCING THE FLIR T1030sc

## OUTSTANDING HD INFRARED PERFORMANCE, BUILT ON 50 YEARS OF EXPERIENCE

Born out of five decades of infrared expertise, the FLIR T1030sc is designed for engineers, researchers, and scientists who need exceptional resolution and thermal sensitivity in a flexible, battery-powered, handheld package.

The T1030sc is a high-speed imaging and measurement camera that records 1024 x 768 HD resolution images at 30 frames per second. Stream lossless HD data at 120 Hz via the high-speed interface (HSI), or capture windowed areas at up to 480 Hz. The camera offers a thermal sensitivity of < 20 mK (NETD) and wide temperature ranges with calibrations up to 2000°C.

The T1030sc system includes FLIR OSX™ Precision HDIR optics, featuring an ultrasonic drive, ambient temperature drift compensation, and parasitic radiation protection. View, acquire, analyze, and share the imagery in FLIR's ResearchIR Max or with MathWorks® MATLAB. For even more flexibility, integrate data into your own enterprise platform through ATLAS SDK.

### EXPERT FEATURES FOR EXPERT NEEDS:

- High definition LWIR imagery from an uncooled, portable system
- Thermal sensitivity that's 2.5 times better than industry standard
- Battery-powered, handheld camera goes where you need it
- Records high-speed radiometric video, up to 480 Hz with windowing
- Control and analyze directly from included FLIR ResearchIR Max or 3rd party software
- Wide temperature range for capturing dynamic thermal events
- Never miss a hot spot – record continuous radiometric video
- Customized functionality to fit your expert needs

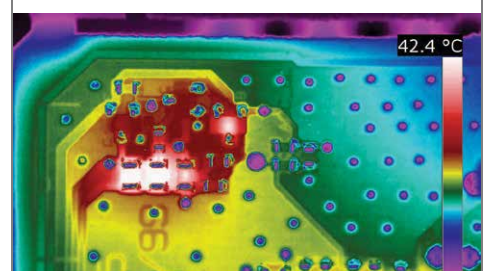
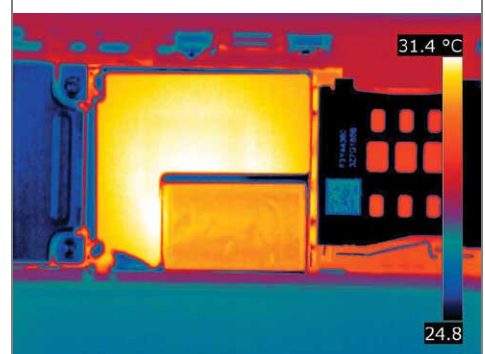
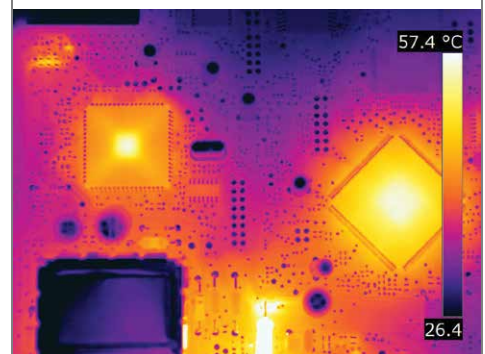
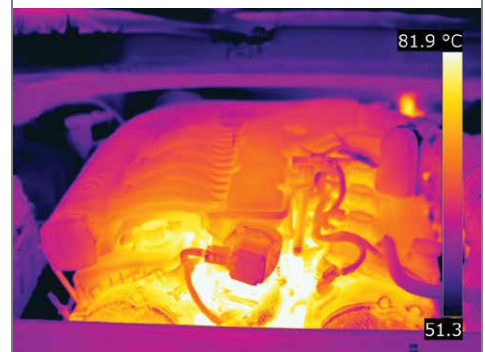
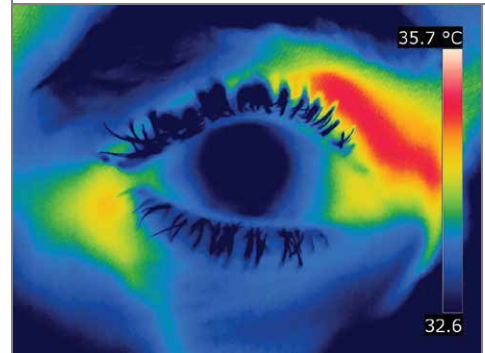


### FLIR 2-5-10 WARRANTY

The T1030sc is covered by our revolutionary FLIR 2-5-10 Warranty when registered within 60 days of purchase.

- 2 Years on camera parts and labor
  - 5 Years on Li-Ion batteries
  - 10 Years on the IR detector

Only FLIR can provide peace of mind like this, because only FLIR makes its critical camera components from the ground up.



# HIGH DEFINITION, HIGH SENSITIVITY THERMAL IMAGING FROM A FLEXIBLE, BATTERY-OPERATED, HANDHELD CAMERA

## T1030 KEY FEATURES



**OUTSTANDING IMAGE QUALITY**  
1024 x 768 LWIR detector offers high resolution and exceptional thermal sensitivity

**FLIR VISION PROCESSOR™**  
MSX®, UltraMax™, and adaptive filtering algorithms ensure the sharpest, most detailed images with the least noise

**WIDE TEMPERATURE RANGE**  
Temperature calibrations up to 2000°C, allowing for the capture of dynamic thermal events

**PORTABLE, HANDHELD, AND BATTERY-POWERED**  
This science unit is easy to take and use wherever you need it, whether that's in a research lab or out in the field

**CONFIGURABLE TO YOUR NEEDS**  
Four programmable buttons, rotating optical block, optional microscope mount, and more help conform this camera to your research needs



**AVOID GLARE IN BRIGHT SURROUNDINGS**  
High resolution viewfinder with glare reducing eyecup makes scanning easier outside the lab

**STREAM OR RECORD RADIOMETRIC VIDEO**  
Store real-time HD radiometric data in the camera or stream at up to 120 Hz (480 Hz with windowing)

**FLIR OSX™ PRECISION HDIR OPTICAL SYSTEM**  
Provides high-fidelity imagery and accurate temperature measurements, from the telephoto to the microscopic lens

**WIRELESS CONTROL AND DATA SHARING**  
Wi-fi communication simplifies image sharing, remote control and viewing, and quick reporting from the field

# OUTSTANDING IMAGE CLARITY; EXCEPTIONAL PRECISION OPTICS; PORTA

## ULTRAMAX™

FLIR's UltraMax is a unique processing technique that allows you to generate reports with images that have up to four times as many pixels and 50% less noise than standard native images. More pixel coverage with UltraMax helps fill in inactive gaps, producing denser temperature measurements for greater thermal accuracy from even farther away.

## OPTIMAL ERGONOMICS:

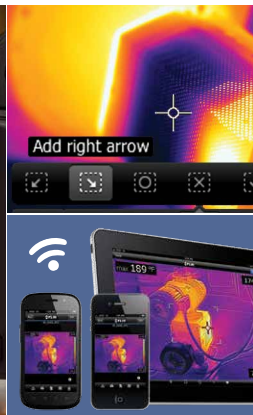
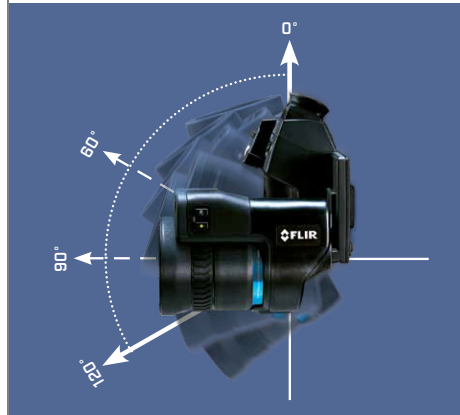
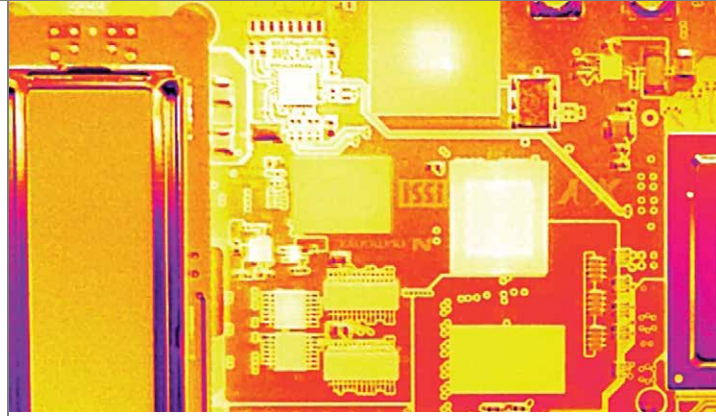
- Rotating optical block puts any target in comfortable viewing range
- Target and scan in bright daylight with high-resolution viewfinder
- Dynamic focus control adjusts to your touch
- Designed to be comfortable in your hand for long-term use

## EASE OF USE:

- Highly responsive touch screen makes menu navigation easy
- Wi-Fi for image sharing & remote control via smart devices
- Voice, text, or sketch annotations add important detail to images

## PORTABILITY, FLEXIBILITY:

- Full recording functionality under battery power
- On-camera measurement tools and analytics
- Programmable buttons and measurement functions

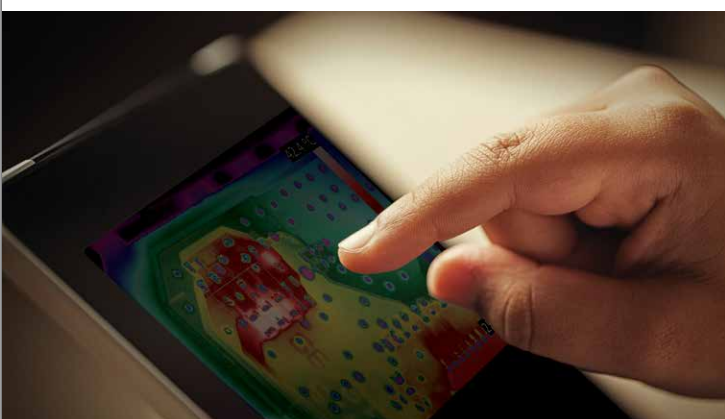


# ABLE, ERGONOMIC DESIGN – THE INNOVATIONS YOU’VE ALWAYS WANTED



## HIGH PERFORMANCE LENSES:

- Lenses designed specifically for use with HD detectors
- Integrated temperature sensors for accurate measurements
- Interchangeable zoom and microscope lenses
- Responsive ultrasonic focus drive



## INTEGRATION AND COMMUNICATION:

- Stream high-speed data through FLIR High-Speed Interface (HSI)
- Control camera and share data from FLIR ResearchIR Max
- Integrate with your enterprise software through ATLAS SDK
- Control camera and stream directly to MathWorks® MATLAB

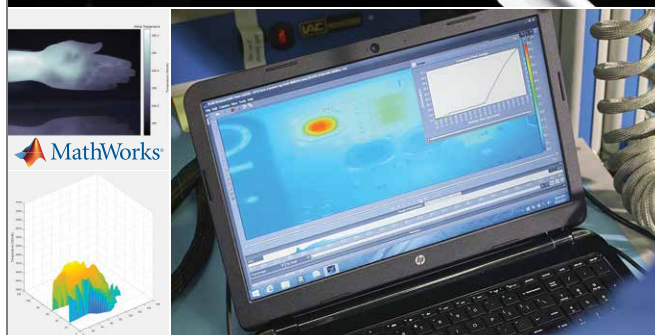
## STREAMLINED DATA CAPTURE AND ANALYSIS

**FLIR ResearchIR Max is a powerful thermal analysis software tool for FLIR R&D / Science cameras. It provides camera control, high-speed data recording, image analysis, and data sharing.**

This software connects directly with the T1030sc and supports multiple acquisition options, including high-speed burst recording and slow-speed data logging. This software is highly customizable, with the ability to set everything from the number of frames acquired to the thermographic and radiometric calibrations.

ResearchIR Max offers real-time image analysis with spots, lines, and other measurement tools. This software's charting and plotting capabilities include line profiles, histograms, and temporal plots for all measurement tools.

For even greater flexibility, FLIR thermal imaging cameras work seamlessly together with standard R&D software programs such as MathWorks® MATLAB. You can access MATLAB scripts directly from ResearchIR for customized thermal analyses and processing. Create plots and reports, or process data as MATLAB code. MATLAB offers object detection and tracking, as well as thermal image enhancements such as filtering, segmentation, and statistics.



# SPECIFICATIONS

|                                    |  |
|------------------------------------|--|
| <b>Model Number</b>                | <b>FLIR T1030sc</b>  |
| <b>Imaging and Optical Data</b>    |  |
| IR Sensor                          | 1024 × 768 pixels  |
| Thermal Sensitivity/NETD           | < 20 mK at +30°C (+86°F)   |
| Lens Choices                       | 12°, 28°, 45°, 50 µm Close-up  |
| Minimum Focus Distance             | 0.4 m (standard lens)  |
| Spatial Resolution/IFOV            | 0.47 mrad (standard lens)  |
| Focus                              | Auto, continuous auto, manual  |
| Digital Zoom                       | 1-8x continuous  |
| Detector Type                      | Focal Plane Array (FPA), uncooled microbolometer   |
| Spectral Range                     | 7.5 - 14 µm  |
| Detector Pitch                     | 17 µm  |
| Display                            | 4.3 in., 800 x 480 pixel capacitive touch screen   |
| Auto Orientation                   | Automatic landscape or portrait  |
| Viewfinder                         | Built-in; 800 x 480 pixels   |
| <b>Image Presentation Modes</b>    |  |
| Thermal Image                      | Full color IR image  |
| Visual Image                       | Full color digital image   |
| MSX®                               | Embosses visual details onto the full resolution thermal image, providing perspective and allowing you to read labels                        |
| UltraMax™                          | Unique super-resolution process quadruples pixel count, up to 3.1 MP   |
| <b>Measurement</b>                 |  |
| Object temp. range                 | +100°C to +650°C (+212°F to +1202°F)<br>-40°C to +150°C (-40°F to +302°F)<br>+300°C to +2000°C (+572°F to +3632°F)                           |
| Accuracy                           | ±1°C (±1.8°F) or ±1% at 25°C for temperatures between 5°C to 150°C.<br>±2°C (±3.6°F) or ±2% of reading at 25°C for temperatures up to 1200°C |
| <b>Measurement Analysis</b>        |  |
| Measurement Tools                  | 10 spotmeters, 5+5 areas (boxes, circles) with max./min./average   |
| Measurement Presets                | No measurements, center spot, hot spot, cold spot, User Preset 1, User Preset 2  |
| Emissivity Correction              | Variable from 0.01 to 1.0 or selected from materials list  |
| Measurements Correction            | Emissivity, reflected temperature, relative humidity, atmospheric temperature, object distance, external IR window compensation              |
| Automatic Gain Control             | Manual, Linear, Histogram  |
| Color Palettes                     | Iron, Rainbow, Rainbow HC, White hot, Black hot, Arctic, Lava  |
| Color Alarm (Isotherm)             | Above/below/interval   |
| Measurement Function Alarm         | Audible/visual alarms (above/below) on any selected measurement function   |
| <b>Storage of Media</b>            |  |
| Storage Media                      | Removable SD card (Class 10)   |
| Image Storage                      | Standard JPEG, including digital photo and measurement data  |
| Time Lapse                         | 15 seconds to 24 hours   |
| File Formats                       | Standard JPEG, measurement data included<br>CSQ, measurement data included   |
| <b>Video Recording/Streaming</b>   |  |
| Time Constant                      | < 10 ms  |
| Frame Rate                         | 30 Hz, full window, in camera<br>120 Hz, full window, with HSI to computer<br>480 Hz, ¼ window with HSI                                      |
| Radiometric IR-Video Recording     | Real-time radiometric recording to SD card   |
| Non-Radiometric IR-Video Recording | H.264 to SD card   |
| Radiometric IR-Video Streaming     | Real-time radiometric streaming via USB  |
| Non-Radiometric IR-Video Streaming | H.264 video using Wi-Fi or USB   |

| Digital Camera            |   |
|---------------------------|---|
| Digital Camera            | Field of View Match: adapts to the IR lens  |
| Video Lamp                | Built-in LED light  |
| Image Annotations         |   |
| Voice                     | 60 sec (via Bluetooth) stored with the image  |
| Text                      | Add table. Select between predefined templates  |
| Image Description         | Short note stored in JPEG exif tag  |
| Sketch                    | Draw on thermal/digital photo or add predefined stamps<br>Separate PC software with extensive report generation |
| Additional Information    |   |
| GPS, Compass              | Location data, camera direction automatically added to every image  |
| Laser Pointer             | Dedicated button, position is automatically displayed on IR image   |
| Interfaces                | USB-micro-AB, Bluetooth, Wi-Fi, HDMI  |
| USB, Connector Type       | USB Micro-B Data transfer to and from PC<br>Uncompressed colorized video  |
| Battery                   | Rechargeable Li-ion polymer battery   |
| Battery Operating Time    | > 2.5 hours at 25°C (+68°F)   |
| Charging System           | In camera (AC adapter or 12 V from a vehicle) or 2-bay charger  |
| Charging Time             | 2.5 hours to 90% capacity   |
| External Power Operation  | AC adapter, 90-260 VAC input, 50/60 Hz or 12 V output from a vehicle (cable with standard plug, optional)       |
| Power Management          | Automatic power-off functionality, user-configurable  |
| Storage Temp. Range       | -40°C to +70°C (-40 to 158°F)   |
| Weight                    | 1.9 kg (4.3 lb.) to 2.1 kg (4.6 lb.), depending upon lens model   |
| Tripod Mounting           | UNC ¼"-20   |
| System Includes:          |   |
| Infrared camera with lens | FLIR ResearchIR Max   |
| Battery (2 each)          | Hard transport case   |
| Battery charger           | Large eyecup  |
| HDMI-HDMI cable           | Lens cap  |
|                           | Bluetooth headset   |
|                           | SD card   |
|                           | Neck strap  |
|                           | Power supply, including multi-plugs   |
|                           | USB cable, Standard A to Mini-B   |
|                           | HSI box   |
|                           | Calibration certificate   |
|                           | FLIR Tools download card  |
|                           | User documentation on CD-ROM  |
|                           | Printed documentation   |

## TRAINING SUPPORT

### SUPPORT FROM ITC

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.

More information is available at [www.infraredtraining.com](http://www.infraredtraining.com)



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[www.flir.com/research](http://www.flir.com/research)  
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