

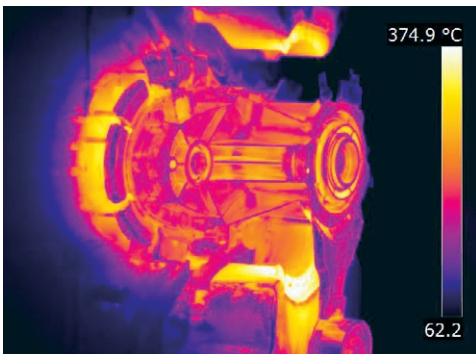


## HD THERMAL IMAGING CAMERA

# FLIR T1K™

The FLIR T1010 and T1020 are portable, high-speed, high definition infrared cameras designed to help you capture stunning thermal images and precise temperature measurement, whether you're in the field or in the lab. These T1K models stream lossless radiometric imagery at 30 Hz, or up to 240 Hz with windowing through the optional High Speed Interface (HSI)\*. With simple connections to FLIR ResearchIR Max software, users can easily view, record, analyze and share data. When paired with a close-up 3x lens, T1K cameras accurately measure temperature on targets down to 51  $\mu\text{m}$ . Whether you're an engineer, researcher, or product developer, these battery-powered, handheld cameras offer the features and flexibility you need.

[www.flir.com/science-T1K](http://www.flir.com/science-T1K)



### OUTSTANDING IMAGE CLARITY

A sensitive detector and HD-ready optics produce stunning thermal images and accurate non-contact temperature measurements

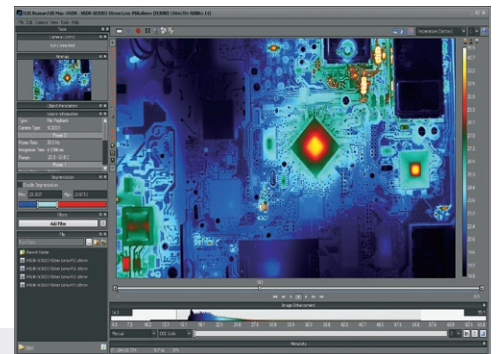
- Get the best resolution of any FLIR uncooled LWIR camera from the 1024 x 768 HD detector
- Capture accurate temperature readings and high-fidelity imagery that's easy to interpret using FLIR OSX™ Precision HDIR lenses
- Record the most detailed, smoothest images thanks to MSX®, UltraMax®, and proprietary adaptive filtering algorithms—which together comprise FLIR Vision Processing™



### PORTABILITY AND FLEXIBILITY

Battery-powered, handheld camera goes where you go, whether you're in the lab or in the field

- Have the measurement and analytics tools you need in one ergonomic, handheld, battery-powered package
- Streamline your work through image sharing, remote control, remote viewing, and quick reporting over Wi-Fi communication\*
- Customize the camera to your needs with four programmable buttons and two programmable measurement functions



### HIGH-SPEED DATA—HOW YOU NEED IT

Stream uncompressed data to a PC or capture fully-dynamic radiometric video in the camera\*

- Capture lossless HD radiometric imagery at up to 120 Hz or windowed areas at up to 240 Hz via FLIR High-Speed Interface (sold separately)\*
- Work faster and more efficiently by streaming directly to a computer running FLIR ResearchIR Max, for instant analysis and sharing
- Easily integrate radiometric images and data into your enterprise software program via ATLAS SDK

\*T1020 only

## SPECIFICATIONS

Imaging, Optics & Detector	T1010	T1020
IR Resolution	1024 × 768 (786,432 pixels)	1024 × 768 (786,432 pixels)
UltraMax®	3.14 Mpixels	3.14 Mpixels
Thermal Sensitivity/NETD	<25 mK @ 30°C (86°F)	<20 mK @ 30°C (86°F)
Field of View (FOV)	52° × 40° (50 mm close-up lens), 45° × 34° (21 mm lens), 28° × 21° (36 mm lens), 12° × 9° (83 mm lens), 7° × 5.3° (142 mm lens)	52° × 40° (50 mm close-up lens), 45° × 34° (21 mm lens), 28° × 21° (36 mm lens), 12° × 9° (83 mm lens), 7° × 5.3° (142 mm lens)
F-Number	f/1.15 (28°/36 mm lens)	f/1.15 (28°/36 mm lens)
Lens Identification	Automatic	Automatic
Image Frequency	30 Hz	30 Hz
Focus	One-shot, manual	One-shot, manual
Digital Zoom	1-8x continuous	1-8x continuous
Detector Type and Pitch	Uncooled microbolometer, 17 μm	Uncooled microbolometer, 17 μm
Spectral Range	7.5 – 14.0 μm	7.5 – 14.0 μm
Image Presentation & Modes		
Display	4.3", 800 × 480 pixel capacitive touch screen with auto-orientation	4.3", 800 × 480 pixel capacitive touch screen with auto-orientation
Viewfinder	—	Built-in, 800 × 480 pixels
Digital Camera	5 MP with built-in LED	5 MP with built-in LED
Color Palettes	Iron, Rainbow, Rainbow HC, White hot, Black hot, Arctic, Lava,	Iron, Rainbow, Rainbow HC, White hot, Black hot, Arctic, Lava,
Image Modes	Infrared, visual, MSX	Infrared, visual, MSX, Picture-in-Picture
Picture-in-Picture	—	Resizable and movable
Time-lapse (Infrared)	—	15 sec to 24 hrs
Measurement & Analysis		
Object Temperature Range	-40°C to 150°C (-40°F to 302°F), 0°C to 650°C (32°F to 1202°F)	-40°C to 150°C (-40°F to 302°F), 0°C to 650°C (32°F to 1202°F), 300°C to 2000°C (572°F to 3632°F)
Accuracy	±2°C (±3.6°F) or ±2% of reading at 25°C (77°F)	±1°C (±1.8°F) or ±1% of reading at 25°C (77°F) for temperatures from 5°C to 150°C (41°F to 302°F)
Alarms	—	Above, below, interval, moisture, insulation
Measurement Function Alarm	—	Audible/visible above/below alarms on any selected measurement function
Compass, GPS	—	Yes; automatic GPS image tagging
METERLiNK®	—	Yes; several readings
Measurement Presets	No measurement, center spot, hot spot, cold spot, User Preset 1, User Preset 2	No measurement, center spot, hot spot, cold spot, User Preset 1, User Preset 2
Spotmeter	1	10
Area	1 box with max/min/avg	5 + 5 areas (boxes and circles) with max/min/avg
Laser Pointer	Dedicated button	Dedicated button
Data Storage & Streaming		
Image File Format	Standard JPEG with measurement data included	Standard JPEG with measurement data included
Radiometric IR Video Recording	—	Real-time radiometric recording (.csq)
Non-Radiometric IR or Visual Video	H.264 to SD card	H.264 to SD card
Radiometric IR Video Streaming	Real-time radiometric streaming 30 Hz (RTRS) via USB Full dynamic uncompressed 120 Hz 16-bit using HSI	Real-time radiometric streaming 30 Hz (RTRS) via USB Full dynamic uncompressed 120 Hz 16-bit using HSI
Non-Radiometric IR Streaming	H.264 over USB	H.264 over Wi-Fi or USB
Windowing	—	Based on 30 Hz: 1/4 window at 120 Hz for range -40°C to 150°C (-40°F to 302°F) Based on 120 Hz: 1/2 window at 240 Hz for ranges 0°C to 2000°C (32°F to 3632°F)
Video Out	HDMI 640 × 480, HDMI 1280 × 720, DVI 640 × 480, DVI 800 × 600	HDMI 640 × 480, HDMI 1280 × 720, DVI 640 × 480, DVI 800 × 600
Additional Data		
Battery Type	Rechargeable Li-ion battery	Rechargeable Li-ion battery
Battery Operating Time	Approx. 2.5 hours at 25°C (77°F) ambient temperature and typical use	Approx. 2.5 hours at 25°C (77°F) ambient temperature and typical use
Operating Temperature Range	-15°C to 50°C (5°F to 122°F)	-15°C to 50°C (5°F to 122°F)
Storage Temperature Range	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)
Shock/Vibration/Encapsulation; Safety	25 g / IEC 60068-2-29, 2 g / IEC 60068-2-6, IP 54 / IEC 60529; EN/UL/CSA/PSE 60950-1	25 g / IEC 60068-2-29, 2 g / IEC 60068-2-6, IP 54 / IEC 60529; EN/UL/CSA/PSE 60950-1
Tripot Mounting	UNC ¼"-20	UNC ¼"-20
Weight/Dimensions w/o Lens	2.1 kg (4.6 lbs), 16.7 × 20.5 × 18.8 cm (6.6 × 8.0 × 7.4 in)	2.1 kg (4.6 lbs), 16.7 × 20.5 × 18.8 cm (6.6 × 8.0 × 7.4 in)
Box Contents		
	Infrared camera with lens, battery (2 ea) battery charger, neck strap, hard transport case, Bluetooth headset*, lens cap, power supplies, SD card, cables (Std A to Micro-B USB, HDMI to HDMI), FLIR Tools+, printed documentation	

Specifications are subject to change without notice. For the most up-to-date specs, go to [www.flir.com](http://www.flir.com)

\*T1020 model only

### CORPORATE HEADQUARTERS

FLIR Systems, Inc.  
27700 SW Parkway Ave.  
Wilsonville, OR 97070  
PH: +1 877.773.3547

### LATIN AMERICA

FLIR Systems Brasil  
Av. Antonio Bardella, 320  
Sorocaba, SP 18085-852  
Brasil  
PH: +55 15 3238 7080

### CHINA

FLIR Systems Co., Ltd  
Rm 1613-16, Tower II  
Grand Central Plaza  
138 Shatin Rural Committee Rd.  
Shatin, New Territories  
Hong Kong  
PH: +852 2792 8955

### EUROPE

FLIR Systems, Inc.  
Luxemburgstraat 2  
2321 Meer  
Belgium  
PH: +32 (0) 3665 5100

[www.flir.com](http://www.flir.com)  
NASDAQ: FLIR

Equipment described herein may require US Government authorization for export purposes. Diversion contrary to US law is prohibited. Imagery for illustration purposes only. Specifications are subject to change without notice. ©2018 FLIR Systems, Inc. All rights reserved. (10/31/18)

18-1266-INS-SCI



The World's Sixth Sense®