



FLIR TAU 2

Longwave Infrared Thermal Camera

FLIR® Tau® 2 thermal imaging cameras offer an unmatched set of features, making them well-suited for demanding applications, such as unmanned vehicles (UVs), thermal weapon sights, and handheld imagers. Improved electronics now give Tau 2 even more capabilities, including radiometry, increased sensitivity, a 60Hz frame rate, and powerful image processing modes that dramatically improve detail and contrast.

IMPROVED IMAGE PROCESSING

For clearer imagery, edge sharpening, and contrast

- Second generation Digital Detail Enhancement (DDE)
- Active Contrast Enhancement (ACE)
- Smart Scene Optimization (SSO)
- Information Based HEQ (IBHEQ) automatically adjusts AGC
- Silent Shutterless NUC for continuous image improvement

ACCURATE TEMPERATURE MEASUREMENT

Supports radiometry, analytics and telemetry

- TLinear output places temperature data in each pixel
- Adjustable isotherm thresholds colorize temperatures of interest
- Rugged and reliable in all terrain

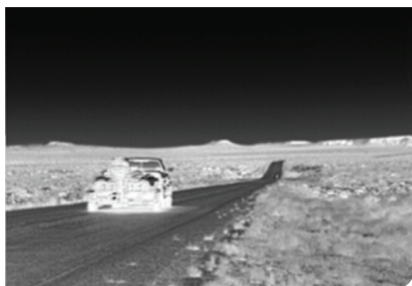
COMMON FEATURES ACROSS MODELS

Fosters improved OEM integration

- 640, 336 and 324 resolutions
- Multiple lens and FOV options
- 60Hz or 30mK frame rates
- Mechanical / electrical compatibility
- FLIR brand and support



Tau image Without ACE



Tau image with new ACE feature

Imaging Specifications

System Overview	
System Type	Uncooled LWIR Thermal Imager
Tau 2 640	640 x 512 VOx Microbolometer
Tau 2 336	336 x 256 VOx Microbolometer
Tau 2 324	324 x 256 VOx Microbolometer
Pixel Size	17 µm (Tau 2 640, 336); 25 µm (Tau 2 324)
Spectral Band	7.5 - 13.5 µm
Performance	<50 mK @ f/1.0
Outputs	
Analog Video	Field-switchable between NTSC and PAL
Tau 2 640	30/60Hz (NTSC); 25Hz/60Hz (PAL); <9Hz option for export (factory set)
Tau 2 336, 324	30/60 Hz (NTSC); 25/50 Hz (PAL) ; <9Hz option for export (factory set)
Digital Video	8- or 14-bit serial LVDS; 8- or 14-bit parallel CMOS; 8-bit BT.656
Operation & Control	
Image Control	Invert, revert, continuous digital zoom, dynamic zoom & pan, digital zoom presets, polarity, false color or monochrome, isotherms, AGC, second generation digital detail enhancement (DDE), image optimization (BPR, NUC & AGC'd video), Active Contrast Enhancement (ACE, Information Based Histogram Equalization (IBHEQ), Smart Scene Optimization (SSO), settable splash screens
Camera Control	Manual via SDK & GUI, dynamic range switching (Tau 2 324 only)
Signal Interface	Camera Link (Expansion Bus Accessory Module), discrete I/O controls available, RS-232 compatible (57,600 & 921,600 baud), external sync input/output, power reduction switch (removes analog video)
FFC Duration	<0.5 sec
Physical Attributes	
Size	1.75" x 1.75" x 1.75" (less lens)
Mounting Interface	6 attach points in lens mount, M2 x 0.4 on 3 sides, 2 per side (sealable bulkhead mounting feature on lens barrel [M29 x 1.0], WFOV only)
Power	
Input Voltage	4.0 – 6.0 VDC
Primary Electrical Connector	50-pin Hirose
Power Dissipation	~ 1.0 W (Tau 2 324 & 336); <1.2 W (Tau 2 640); <1.3W (Tau 2 640/60Hz)
Time to Image	<5 seconds (Tau 2 640); <4 seconds (Tau 2 336 and 324)
Environmental	
Operating Temperature Range	-40° C to +80° C external temp
Storage Temperature Range	-55° C to +95° C external temp
Scene Temp Range	High gain: -40°C to +160°; Low gain: -40°C to +550°
Shock	200 g shock pulse with 11 msec sawtooth
Temperature Shock	5°/min
Vibration	4.3 g 3 axes, 8 hours each
Humidity	5 - 95% non-condensing
Operational Altitude	+40,000 feet
ROHS, REACH, and WEEE	Compliant

Applications:

Unmanned Airborne Vehicles
Handheld imagers
Security Cameras
Maritime cameras
Thermal weapon sights

SANTA BARBARA

FLIR Systems, Inc.
 70 Castilian Drive
 Goleta, CA 93117
 USA
 PH: +1 805.690.5097

EUROPE

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

www.flir.com
 NASDAQ: FLIR

PORTLAND

Corporate Headquarters
 FLIR Systems, Inc.
 27700 SW Parkway Ave.
 Wilsonville, OR 97070
 USA
 PH: +1 866.477.3687

CHINA-SHANGHAI

FLIR Systems Co., Ltd.
 K301-302, No 26 Lane
 168, Daduhe Road,
 Putuo District, Shanghai
 200062, P.R.China
 PH: +86-21-5169 7628

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. ©2014 FLIR Systems, Inc. All rights reserved. (Updated 11/21/14)