

TAU® 2+

Longwave Infrared Thermal Camera Module
with Enhanced Performance and Increased Sensitivity

Made in USA, the Tau 2+ is the most advanced, highest performance longwave infrared (LWIR) Tau 2 camera model from Teledyne FLIR. It maintains the widely deployed and real-world-tested Tau 2 mechanical, electrical, and optical interfaces allowing plug-and-play with existing designs. Its new 1.5x sensitivity improvement and an entirely redesigned image processing engine deliver dramatically enhanced scene contrast and sharpness. Tau 2+ is the go-to thermal camera module for the most challenging environments, including detection of the smallest, hardest to find targets over long distances. Enhanced LWIR thermal performance and market-leading reliability provide low-risk development in the short run and the long run, making it the ideal thermal camera module for unmanned vehicles, security applications, and thermal sights.

APPLICATIONS

- UNMANNED VEHICLES
- HANDHELD IMAGERS
- SECURITY CAMERAS
- MARITIME CAMERAS
- THERMAL SIGHTS



TAU 2+



WFOV & NFOV lens options available from 7.5mm to 100mm



DETECT OBJECTS AT GREATER DISTANCES

NEDT of <25 mK extends detection, recognition, and identification (DRI) performance

- 1.5x increase in thermal sensitivity
- 640 x 480 VGA resolution
- Simple optical interface accommodates integrator-designed optics



RESOLVE KEY INFORMATION WITH SHARPER IMAGES AND IMPROVED CONTRAST

Best in class image processing algorithm provides clearer thermal details in challenging environments

- New level of minimum resolvable of temperature difference (MRTD)
- Low image noise
- Improves scene contrast with blacker blacks and whiter whites



DESIGNED FOR INTEGRATORS

Shared Tau 2 interface and access to US-based Technical Services team reduce development risk and shorten time to market

- Commercial off-the-shelf connectors including USB, CMOS, Camera Link, or Ethernet
- Comprehensive product documentation and many years of reliable Tau production experience
- Industry's widest variety of lens options available
- Highly qualified Technical Services team available to support integration

For More Information Visit:
<https://www.flir.com/tau-series>

www.teledyneflir.com

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SPECIFICATIONS

System Overview		TAU 2+	
System Type	Uncooled LWIR Thermal Imager		
Thermal Resolution	640 x 512 VOx Microbolometer		
Pixel Size	17 µm		
Spectral Band	7.5 - 13.5 µm		
Sensitivity (NEΔT)	<25 mK		
Scene Dynamic Range	0 °C to +80°C		
Outputs			
Analog Video	640 x 480 (NTSC); 640 x 512 (PAL)		
Exportable Frame Rates			
Digital Video	30 Hz (NTSC); 25 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	<ul style="list-style-type: none"> Invert, Revert Continuous digital zoom Dynamic zoom & pan Digital zoom preset Polarity False color or monochrome, Isotherms Automatic Gain Correction (AGC), second generation 	<ul style="list-style-type: none"> Image optimization (BPR, Non-Uniformity Correction (NUC) - & AGC'd video) Smart Scene Optimization (SSO) Settable splash screen Advanced Detail Enhancement (ADE) 	
Camera Control	Manual via SDK & GUI		
Signal Interface	<ul style="list-style-type: none"> Camera Link (Expansion Bus Accessory Module) Discrete I/O controls available, RS-232 compatible (57,600 & 921,600 baud) 	<ul style="list-style-type: none"> External sync input/output, Power reduction switch (removes analog video) 	
FFC Duration	<0.5 sec		
Physical Attributes			
Size	1.75" x 1.75" x 1.18" (Standard Version) 1.5" x 1.5" x 1.18" (Compact and Shutterless)		
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	<1.2W		
Time to Image	<5 seconds		
Environmental			
Operating Temperature Range	-40° C to +80° C external temp		
Storage Temperature Range	-55° C to +95° C external temp		
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		

Specifications are subject to change without notice.
For the most up-to-date specs, go to <https://www.flir.com/tau-series>

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SANTA BARBARA
Teledyne FLIR LLC, Inc.
6769 Hollister Ave.
Goleta, CA 93117
PH: +1 805.690.6602

EUROPE
Teledyne FLIR LLC, Inc.
Luxemburgstraat 2
2321 Meer
Belgium
PH: +32 (0) 3665 5106

TeleEye (South Africa) / GoThermal Unit 4,
4 Homestead Ave.
Bryanston
Johannesburg
South Africa

Tel: (+27) 11 557 9200
e-mail: Sales@GoThermal.co.za