

## SHORTWAVE INFRARED (SWIR) CAMERA

## FLIR Tau® SWIR

FLIR Tau® SWIR and broadened spectral range Tau Vis-SWIR joins the FLIR Tau and Neutrino families of best-in-class size, weight and power (SWaP) optimized cameras. A short-wave infrared camera core, it is designed for a variety of OEM applications, including hyperspectral instrumentation, silicon inspection, electro-optical payloads, art restoration, counterfeit detection, and portable applications. The Tau SWIR provides outstanding image quality and performance over a wide range of imaging and light level conditions.

Tau SWIR incorporates the FLIR high resolution  $640 \times 512$  ISC1202 Indium Gallium Arsenide (InGaAs) 15-micron pitch focal plane array (FPA) and includes several advanced camera controls features.

www.flir.com



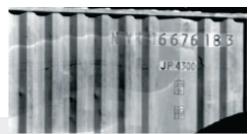
## MARKET-LEADING FEATURES

- High resolution InGaAs 640x512/15µm FPA
- On-chip correlated double sampling (CDS) for noise reduction
- Anti-blooming snapshot integration
- 14-bit CMOS digital video and NTSC/PAL analog video
- Three gain state operating mode for low light applications



# SIZE, WEIGHT AND POWER (SWaP) OPTIMIZED

- 38 mm x 38 mm x 36 mm
- <81 grams
- <3.2 Watts power (at room temperature)



## **TECHNICAL PERFORMANCE**

- >65% quantum efficiency
- Auto Exposure control
- Full suite of FLIR's advanced image processing modes
- 60 frames per second (60 Hz), 120 Hz in zoom mode

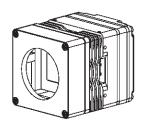
## **SPECIFICATIONS**

	Tau SWIR	Tau Vis-SWIR
Overview		
Sensor Technology	Shortwave Infrared (SWIR) Camera Core	Shortwave Infrared (SWIR) Camera Core
Detector Type	Indium Gallium Arsenide (InGaAs)	Indium Gallium Arsenide (InGaAs)
Array format	640 x 512	640 x 512
Pixel Pitch	15 μm	15 μm
Spectral Range	0.9 – 1.7 μm (SWIR)	0.6 – 1.7 μm (Vis-SWIR)
Imaging & Optical		
Active Area	9.6 × 7.68 mm	9.6 × 7.68 mm
Digital Detail Enhancement	Yes	Yes
Digital Zoom	Yes	Yes
Full Frame Rate	NTSC: 60 Hz (120 Hz in zoom mode) PAL: 50 Hz (100 Hz in zoom mode)	NTSC: 60 Hz (120 Hz in zoom mode) PAL: 50 Hz (100 Hz in zoom mode)
Image Optimization	Yes	Yes
Invert/Revert	Yes	Yes
Lens Mount	C-mount	C-mount
NTSC/PAL (field switchable)	Yes	Yes
Noise Equivalent Irradiance (NEI)	1.64 x 10 <sup>9</sup> (Industrial Spec); 1.06 x 10 <sup>10</sup> (Professional Spec); 2.46 x 10 <sup>10</sup> (Consumer Spec) Note: integration times assumed are 33ms, 5ms, and 2ms for Industrial, Professional, and Consumer specs respectively.	1.33 x 10 <sup>9</sup> (Industrial Spec); 1.06 x 10 <sup>10</sup> (Professional Spec); 2.46 x 10 <sup>10</sup> (Consumer Spec) Note: integration times assumed are 33ms, 5ms, and 2ms for Industrial, Professional, and Consumer specs respectively.
Operability	> 99.5% (Industrial Spec); > 99.0% (Professional Spec); > 98.0% (Consumer Spec)	> 99.5% (Industrial Spec); > 99.0% (Professional Spec); > 98.0% (Consumer Spec)
Optical Fill Factor	100%	100%
Polarity Control (black hot & white hot)	Yes	Yes
Quantum Efficiency (1 - 1.5µm)	> 65% (Industrial Spec), > 60% (Professional & Consumer Spec)	> 80% (Industrial Spec), > 60% (Professional & Consumer Spec)
Symbology	Yes	Yes
Time to Image	<7 sec	<7 sec
Connections & Cor	mmunications	
Discrete I/O Controls Available	Yes	Yes
External Sync Input/ Output	Yes	Yes
Primary Camera - TEC	50-pin Hirose/2-pin Molex	50-pin Hirose/2-pin Molex
RS-232 Compatible Communication	57,600 & 921,600 baud	57,600 & 921,600 baud
Settable Splash Screens	Yes	Yes
User Configurability via SDK & GUI	Yes	Yes

Electrical & Mechanical		
ESD Protection	Built-In	Built-In
Precision Mounting Holes	M2 × 0.4 on 4 sides, 2 per side	M2 × 0.4 on 4 sides, 2 per side
Size	38 x 38 x 36 mm (w/o optics)	38 x 38 x 36 mm (w/o optics)
Environmental & Approvals		
Humidity	5 – 95% non-condensing	5 – 95% non-condensing
Operational Altitude	+12 km	+12 km
Shock	500g @ 0.8 msec	500g @ 0.8 msec
Vibration	4.3g three axis	4.3g three axis
Power		
Input Supply Voltage	4.9 – 5.5 VDC	4.9 – 5.5 VDC



Optional VPC Module and Tripod Mount accessories shown.



Specifications are subject to change without notice. For the most up-to-date specs, go to www.flir.com  $\,$ 

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