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 SHARPHER 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
## SPECIFICATIONS

### System Overview

<table>
<thead>
<tr>
<th>TAU 2+</th>
<th>Uncooled LWIR Thermal Imager</th>
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</thead>
<tbody>
<tr>
<td>System Type</td>
<td>640 x 512 VOx Microbolometer</td>
</tr>
<tr>
<td>Thermal Resolution</td>
<td>17 µm</td>
</tr>
<tr>
<td>Pixel Size</td>
<td>7.5 - 13.5 µm</td>
</tr>
<tr>
<td>Spectral Band</td>
<td>&lt;25 mK</td>
</tr>
<tr>
<td>Sensitivity (NEdT)</td>
<td>0 °C to +80°C</td>
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</tbody>
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### Outputs

| Analog Video | 640 x 480 (NTSC); 640 x 512 (PAL) |
| Exportable Frame Rates | 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

- Invert, Revert
- Continuous digital zoom
- Dynamic zoom & pan
- Digital zoom preset
- Polarity
- False color or monochrome,
- Isotherms
- Automatic Gain Correction (AGC), second generation

#### Camera Control

- Manual via SDK & GUI

#### Signal Interface

- Camera Link (Expansion Bus Accessory Module)
- Discrete I/O controls available,
- RS-232 compatible (57,600 & 921,600 baud)

#### 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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**For More Information Visit:**
https://www.flir.com/tau-series

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**www.teledyneflir.com**