ImageIR® 7300
High-end Thermography Camera

Europe’s leading specialist for infrared sensors and measurement technology

Cooled FPA photon detector with (640 × 512) IR pixels
Frame rate up to 1,200 Hz, GigE Vision compatible
Snapshot detector, internal trigger interface
Extremely short integration times in the microsecond range
Pixel size up to 2 μm
Thermal resolution better than 0.02 K

1) ImageIR® 7300
2) Software IRBIS® 3
3) Circuit board

www.InfraTec.eu
www.InfraTec-infrared.com

Made in Germany
Spectral range: (2.0 … 5.7) µm
Pitch: 15 µm
Detector: MCT or InSb
Detector format (IR pixels): (640 × 512)
Image acquisition: Snapshot
Readout mode: ITR / IWR
Aperture ratio: f/3.0 or f/2.0
Detector cooling: Stirling cooler
Temperature measuring range: -40 … 300 °C
Measurement accuracy: ± 2 °C or ± 2 %
Temperature resolution @ 30 °C: MCT: Better than 0.02 K
InSb: Better than 0.025 K
Frame rate (full / half / sub frame)*: MCT: Up to 75 / 300 / 1,200 Hz
InSb: Up to 100 / 326 / 863 Hz
Window mode: Yes* (full frame / sub frame)
Focus: Manual
Dynamic range: 14 bit
Integration time: (1 … 20,000) µs
Rotating filter wheel*: Up to 5 positions
Rotating aperture wheel*: Up to 5 positions
Interfaces: GigE, HDMI*
Trigger: 1 IN / 1 OUT, TTL
Tripod adapter: 1/4" and 3/8" photo thread, 2 × M5
Power supply: 24 V DC, wide-range power supply (100 … 240) V AC
Storage and operation temperature: (-40 … 70) °C, (-20 … 50) °C
Protection degree: IP54, IEC 60529
Dimensions; weight: MCT: (235 × 120 × 160) mm*
InSb: (241 × 120 × 160) mm*
3.3 kg (without lens)
Analysis and evaluation software: IRBIS® 3, IRBIS® 3 view, IRBIS® 3 plus*, IRBIS® 3 professional*, IRBIS® 3 control*, IRBIS® 3 online*, IRBIS® 3 process*, IRBIS® 3 active*, IRBIS® 3 mosaic*, IRBIS® 3 vision*
* Depending on model

Those, who are looking for a powerful thermographic camera to solve fundamental measurement and testing tasks in the fields of industry and science, that offers an impressive geometrical resolution will find the ImageIR® 7300 a perfect match. Its cooled focal-plane array photon detector provides (640 × 512) IR pixels and a pitch of 15 µm at a constant active detector area. Users, who are testing very small structures on large-scale measurement objects, benefit from substantial plus in terms of efficiency compared to smaller detector formats. In addition, you can choose between MCT and InSb detectors.

The camera supports recording and storing images and sequences with frequencies up to 1,200 Hz. An internal trigger interface guarantees for precise, repeatable triggering of correspondingly fast processes. Two respective inputs and outputs are used to control the camera or to generate digital control signals for external devices. Depending on the character of the measurement and testing situation due to its modular design, most diverse thermographic software and high-quality lenses the ImageIR® 7300 is quite easy to adapt to the on-site conditions.

### Lenses

<table>
<thead>
<tr>
<th>Lenses</th>
<th>Focal length (mm)</th>
<th>FOV (°)</th>
<th>IFOV (mrad)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wide-angle lens</td>
<td>12</td>
<td>(43.6 × 35.5)</td>
<td>1.3</td>
</tr>
<tr>
<td>Standard lens</td>
<td>25</td>
<td>(21.7 × 17.5)</td>
<td>0.6</td>
</tr>
<tr>
<td>Telephoto lens</td>
<td>50</td>
<td>(11.0 × 8.8)</td>
<td>0.3</td>
</tr>
<tr>
<td>Telephoto lens</td>
<td>100</td>
<td>(5.5 × 4.4)</td>
<td>0.15</td>
</tr>
<tr>
<td>Telephoto lens</td>
<td>200</td>
<td>(2.7 × 2.2)</td>
<td>0.08</td>
</tr>
</tbody>
</table>

### Macro and Microscopic lenses

<table>
<thead>
<tr>
<th>Minimum object distance (mm)</th>
<th>Object size (mm)</th>
<th>Pixel size (µm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close-up for telephoto lens 50 mm</td>
<td>300</td>
<td>(58 × 46)</td>
</tr>
<tr>
<td>Close-up for telephoto lens 100 mm</td>
<td>500</td>
<td>(48 × 38)</td>
</tr>
<tr>
<td>Microscopic lens M = 1.0x (3 versions)</td>
<td>40 / 195 / 300</td>
<td>(9.6 × 7.7)</td>
</tr>
<tr>
<td>Microscopic lens M = 3.0x</td>
<td>22</td>
<td>(3.2 × 2.6)</td>
</tr>
<tr>
<td>Microscopic lens M = 8.0x</td>
<td>14</td>
<td>(1.2 × 1.0)</td>
</tr>
</tbody>
</table>

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