ImageIR® 9300
High-end Thermography Camera

Europe’s leading specialist for infrared sensors and measurement technology

Cooled FPA photon detector with (1,280 × 1,024) IR pixels
Full-frame rate up to 106 Hz, GigE Vision compatible
Snapshot detector, internal trigger interface
Extremely short integration times in the microsecond range
Optimal integration time with HighSense
Pixel size with microscopic lens up to 2 µm
Thermal resolution up to 0.025 K

1) ImageIR® 9300 with microscopic lens
2) Controlling and acquisition software for facility protection
3) Microscopic thermography

www.InfraTec.eu
www.InfraTec-infrared.com
**Spectral range**
(2.0 ... 5.7) µm

**Pitch**
15 µm

**Detector**
InSb

**Detector format (IR pixels)**
(1,280 x 1,024)

**Image acquisition**
Snapshot

**Readout mode**
ITR / IWR

**Aperture ratio**
f/2.0 or f/4.6

**Detector cooling**
Stirling cooler

**Temperature measuring range**
(-40 ... 1,500) °C, up to 2,000 °C*

**Measurement accuracy**
± 1 °C or ± 1 %

**Temperature resolution @ 30 °C**
0.025 K

**Frame rate (full / half / quarter / sub frame)**
Up to 106 / 200 / 390 / 3,200 Hz

**Window mode**
Yes

**Focus**
Manually, motorised or automatically*

**Dynamic range**
Up to 16 bit*

**Integration time**
(0.5 ... 18,000) µs

**Rotating filter wheel**
Up to 5 positions

**Rotating aperture wheel**
Up to 5 positions

**Interfaces**
GigE, 10 GigE*, 2 × CAMLink*, HDMI*

**Trigger**
3 IN / 2 OUT, TTL

**Analogue signals**, IRIG B*
2 IN / 2 OUT, yes

**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, (10 ... 50) °C

**Protection degree**
IP54, IEC 60529

**Dimensions; weight**
(235 × 120 × 160) mm*; 4.0 kg (without lens)

**Further functions**
Multi Integration Time*, HighSense*

**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

With its ImageIR® 9300, InfraTec introduces another top-level thermographic camera model belonging to the ImageIR® high-end camera series. It is equipped with a new generation cooled focal-plane array photon detector that provides a format of (1,280 x 1,024) IR pixels – four times higher than comparable competitive units. Combining an outstanding thermal resolution of 0.025 K with very high frame rates of 106 Hz and extremely short integration times of only a few microseconds, this camera offers you a whole new range of applications. ImageIR® 9300 was developed for demanding operations in research and development, non-destructive material testing and process monitoring sectors. Its modular structure, which consists of optical, detector and interface modules, makes it easily adaptable to the respective application.

An integrated trigger interface guarantees a repeatable high-precision triggering of quick procedures. Multiple configurable digital in- and outputs serve as control ports for the camera or as generator of control signals for external devices. The optical channel consists of exchangeable infrared lens systems as well as application-specific apertures, filters and optical elements. All exchangeable radiometric precision lenses of the ImageIR® can be equipped with a motorised focus unit, which is operated from the camera’s application software. It allows quick, precise and remotely controllable motorised focusing and is a part of the optional autofocus function.

### 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>25</td>
<td>(42.0 × 34.2)</td>
<td>0.6</td>
</tr>
<tr>
<td>Standard lens</td>
<td>50</td>
<td>(21.7 × 17.5)</td>
<td>0.3</td>
</tr>
<tr>
<td>Telephoto lens</td>
<td>100</td>
<td>(11.0 × 8.8)</td>
<td>0.15</td>
</tr>
<tr>
<td>Telephoto lens</td>
<td>200</td>
<td>(5.5 × 4.4)</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>(115 × 92)</td>
<td>90</td>
</tr>
<tr>
<td>Close-up for telephoto lens 100 mm</td>
<td>(96 × 77)</td>
<td>75</td>
</tr>
<tr>
<td>Microscopic lens M=1.0×</td>
<td>(19 × 15)</td>
<td>15</td>
</tr>
<tr>
<td>Microscopic lens M=8.0×</td>
<td>(2.4 × 1.92)</td>
<td>1.9</td>
</tr>
</tbody>
</table>

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Design, specification and technical progress subject to change without prior notice.

Further information on the internet.