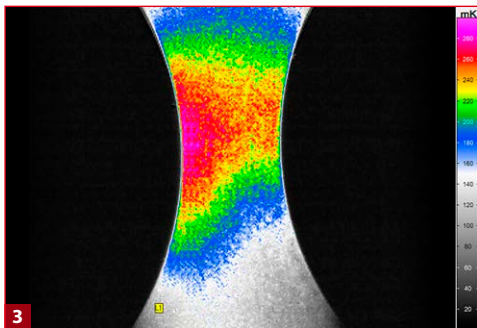
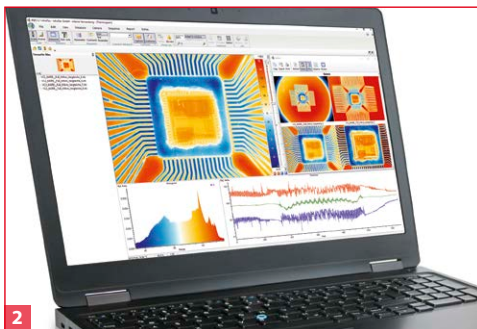


ImageIR® 8300

High-end Thermography Camera

INFRA^{TEC}.

Europe's leading specialist for infrared sensors and measurement technology



- 1) ImageIR® 8300 with interchangeable lenses from InfraTec
- 2) Software IRBIS® 3
- 3) Thermal Stress Analysis with Lock-in Thermography



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 \times 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 ... 1,500) $^{\circ}\text{C}$, up to 3,000 $^{\circ}\text{C}^*$ |
| Measurement accuracy | $\pm 1^{\circ}\text{C}$ or $\pm 1\%$ |
| Temperature resolution @ 30 $^{\circ}\text{C}$ | MCT: Better than 0.02 K InSb: Better than 0.025 K |
| Frame rate (full / half / quarter / sub frame)* | MCT: Up to 151 / 540 / 1,520 / 2,807 Hz InSb: Up to 205 / 570 / 1,020 / 5,000 Hz |
| Window mode | Yes |
| Focus | Manual, motorised or automatically* |
| Dynamic range | Up to 16 bit* |
| Integration time | (0.6 ... 20,000) μs |
| Rotating filter wheel* | Up to 5 positions |
| Rotating aperture wheel* | Up to 5 positions |
| Interfaces | GigE, CAMLink*, HDMI* |
| Trigger | 3 IN / 2 OUT, TTL |
| Tripod adapter | 1/4" and 3/8" photo thread, 2 \times M5 |
| Power supply | 24 V DC, wide-range power supply (100 ... 240) V AC |
| Storage and operation temperature | (-40 ... 70) $^{\circ}\text{C}$, (-20 ... 50) $^{\circ}\text{C}$ |
| Protection degree | IP54, IEC 60529 |
| Dimensions; weight | MCT: (241 \times 120 \times 160) mm*; InSb: (235 \times 120 \times 160) mm* 3.3 kg (without lens) |
| Further functions | Multi Integration Time* |
| 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 Imager[®] 8300, InfraTec introduces another top level thermographic camera model belonging to the Imager[®] high-end camera series. The implementation of a **(640 \times 512) IR pixel MWIR detector** allows **205 Hz full-frame** real-time imaging without compromising any thermal accuracy. The Imager[®] 8300 and its cooled focal-plane array photon detector reach an outstanding **thermal resolution better than 0.02 K**. The new version was developed for most demanding operations in research and development and process monitoring fields. Its **modular structure consisting of the optical, detector and interface section**, makes the camera easily compatible to the related applications and for tailored configurations. An **integrated trigger interface** guarantees a repeatable high-precision triggering of quick procedures. **Multiple configurable digital inputs and outputs** serve as control ports for the camera or as generator of digital control signals for external devices. The optical channel consists of the **exchangeable infrared lens** as well as application-specific apertures, filters and reference elements. All exchangeable Imager[®] 8300 standard lenses can be **equipped with a motorised focus unit** easily operable from the camera's application software. It allows **precise, fast and remotely controlled motorised focusing** and is part of the autofocus function.

| Lenses | Focal length (mm) | FOV ($^{\circ}$) | IFOV (mrad) |
|-----------------|-------------------|----------------------|-------------|
| Wide-angle lens | 12 | (43.6 \times 35.5) | 1.3 |
| Standard lens | 25 | (21.7 \times 17.5) | 0.6 |
| Telephoto lens | 50 | (11.0 \times 8.8) | 0.3 |
| Telephoto lens | 100 | (5.5 \times 4.4) | 0.15 |
| Telephoto lens | 200 | (2.7 \times 2.2) | 0.08 |

| Macro and Microscopic lenses | Minimum object distance (mm) | Object size (mm) | Pixel size (μm) |
|------------------------------------|------------------------------|---------------------|------------------------------|
| Close-up for telephoto lens 50 mm | 300 | (58 \times 46) | 90 |
| Close-up for telephoto lens 100 mm | 500 | (48 \times 38) | 75 |
| Microscopic lens M=1.0x | 40 / 195 / 300 | (9.6 \times 7.7) | 15 |
| Microscopic lens M=3.0x | 22 | (3.2 \times 2.6) | 5 |
| Microscopic lens M=8.0x | 14 | (1.2 \times 0.96) | 1.9 |

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