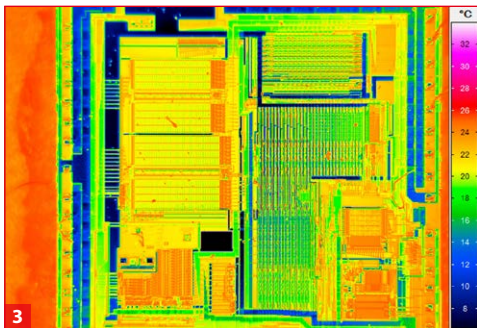
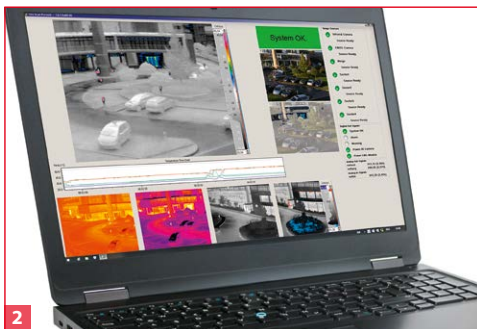
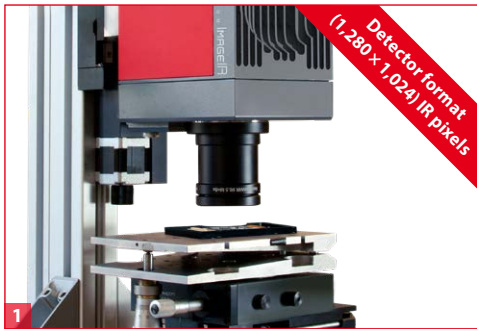


ImageIR® 9300

High-end Thermography Camera



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

INFRA^{TEC}.

Europe's leading specialist for infrared sensors and measurement technology

Cooled FPA photon detector with (1,280 × 1,024) IR pixels

Opto-mechanical MicroScan with (2,560 × 2,048) IR pixels

Full-frame rate up to 106 Hz, GigE Vision interface

Snapshot detector, internal trigger interface

Extremely short integration times in the microsecond range

Pixel size with microscopic lens up to 2 μm

Thermal resolution up to 0.025 K



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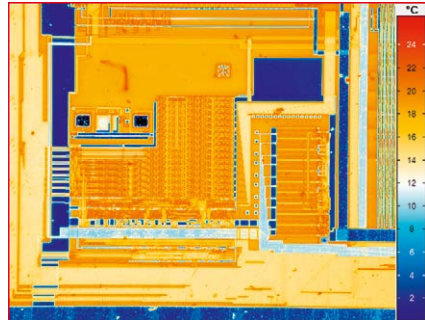
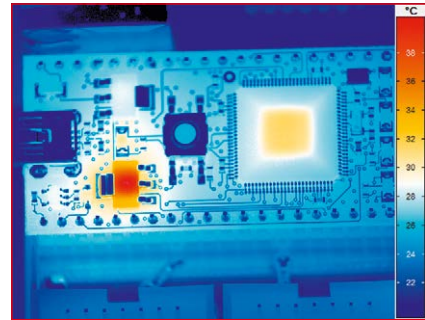
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Made in Germany



| | |
|---|---|
| Spectral range | (2.0 ... 5.7) μm |
| Pitch | 15 μm |
| Detector | InSb |
| Detector format (IR pixels) | (1,280 \times 1,024) |
| Image format with opto-mechanical MicroScan (IR pixels) | (2,560 \times 2,048) |
| 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) $^{\circ}\text{C}$, up to 2,000 $^{\circ}\text{C}^*$ |
| Measurement accuracy | ± 1 $^{\circ}\text{C}$ or ± 1 % |
| Temperature resolution @ 30 $^{\circ}\text{C}$ | 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 |
| Multi integration time* | Yes |
| Interfaces | GigE, 10 GigE*, 2 \times CAMLink*, HDMI* |
| Trigger | 3 IN / 2 OUT, TTL |
| Analogue signals*, IRIG B* | 1 IN / 2 OUT, yes |
| 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 | (235 \times 120 \times 160) mm, 4.0 kg (without lens) |

* Depending on model



With its ImagerIR® 9300, InfraTec introduces another top-level thermographic camera model belonging to the ImagerIR® high-end camera series. It is equipped with a new generation **cooled focal-plane array photon detector** that provides a **format of (1,280 \times 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.

ImagerIR® 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 ImagerIR® 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 | Focal length (mm) | FOV ($^{\circ}$) | IFOV (mrad) |
|-----------------|-------------------|----------------------|-------------|
| Wide-angle lens | 25 | (42.0 \times 34.2) | 0.6 |
| Standard lens | 50 | (21.7 \times 17.5) | 0.3 |
| Telephoto lens | 100 | (11.0 \times 8.8) | 0.15 |
| Telephoto lens | 200 | (5.5 \times 4.4) | 0.08 |

| Macro and microscopic lenses | Minimum object distance (mm) | Object size (mm) | Pixel size (μm) |
|------------------------------------|------------------------------|---------------------|------------------------------|
| Close-up for telephoto lens 50 mm | 300 | (115 \times 92) | 90 |
| Close-up for telephoto lens 100 mm | 500 | (96 \times 77) | 75 |
| Microscopic lens M=1.0x | 40 | (19 \times 15) | 15 |
| Microscopic lens M=8.0x | 14 | (2.4 \times 1.92) | 1.9 |

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