

ImageIR® 4300

High-end Thermography Camera

INFRA^{TEC}.

Europe's leading specialist for infrared sensors and measurement technology

- Cooled FPA photon detector with (320 × 256) IR pixels
- Frame rate up to 706 Hz, GigE vision compatible
- Snapshot detector, internal trigger interface
- Extremely short integration times in the microsecond range
- Pixel size up to 10 μm
- Thermal resolution better than 0.02 K



- 1) ImageIR® 4300
- 2) Software IRBIS® 3
- 3) Drilling process



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Made in Germany



Spectral range	(2.0 ... 5.7) μm
Pitch	30 μm
Detector	MCT or InSb
Detector format (IR pixels)	(320 \times 256)
Image acquisition	Snapshot
Readout mode	ITR
Aperture ratio	f/3.0 or f/2.0
Detector cooling	Stirling cooler
Temperature measuring range	(-40 ... 300) $^{\circ}\text{C}^*$
Measurement accuracy	$\pm 2^{\circ}\text{C}$ or $\pm 2\%$
Temperature resolution @ 30 $^{\circ}\text{C}$	Better than 0.02 K
Frame rate (full / half / sub frame)*	Up to 75 / 265 / 706 Hz
Window mode	Yes* (full frame / sub frame)
Focus	Manual
Dynamic range	14 bit
Integration time	(1 ... 20,000) μs
Interfaces	GigE, HDMI*
Trigger	1 IN / 1 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	(244 \times 120 \times 160) mm*; 3.3 kg (without lens)
Further functions	High-speed mode*, 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

Which qualities characteristic for the high-end camera series Imager[®] are, shows already the entry-level model Imager[®] 4300. Equipped with a cooled **focal plane array photon detector with (320 \times 256) IR pixels** this camera enables users to choose between detectors made of different material for thermal analyses in the SWIR and MWIR. Whether **MCT or InSb detector**, both options support **snapshot mode**. **Recording and storing images with frequencies up to 706 Hz** you can analyse even fast processes. In addition, the Imager[®] 4300 comes with an impressive **thermal resolution up to 0.02 K (20 mK)**. In sum this camera series provides a potential that qualifies for usage for a broad range of applications in the fields of industry and science.

The **robust light-metal housing** of the instruments matches this claim. With the combination of the **modular designed camera concept**, the internal trigger interface, most diverse thermographic software and high-quality lenses users benefit from a high level of flexibility allowing to adapt the cameras to almost every measurement and testing task.

Lenses	Focal length (mm)	FOV ($^{\circ}$)	IFOV (mrad)
Wide-angle lens	12	(43.6 \times 35.5)	2.5
Standard lens	25	(21.7 \times 17.5)	1.2
Telephoto lens	50	(11.0 \times 8.8)	0.6
Telephoto lens	100	(5.5 \times 4.4)	0.3
Telephoto lens	200	(2.7 \times 2.2)	0.15

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)	180
Close-up for telephoto lens 100 mm	500	(48 \times 38)	150
Microscopic lens M=1.0 \times (2 versions)	195 / 300	(9.6 \times 7.7)	30
Microscopic lens M=3.0 \times	22	(3.2 \times 2.6)	10

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