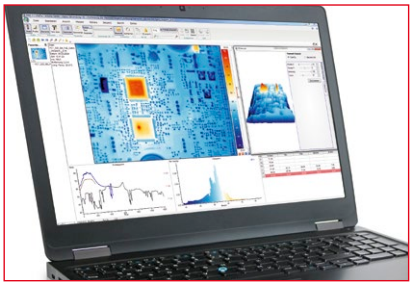
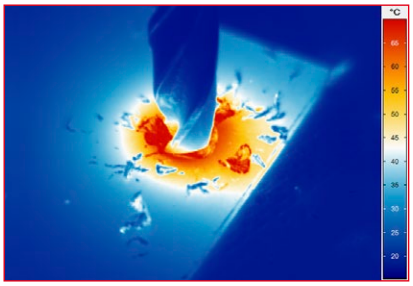
MADE
IN
GERMANY

InfraTec.
Infrarotsensorik und Messtechnik



Software IRBIS® 3



Drilling process

ImageIR® 4300

High-end Thermography with an Entry-level Model

Detector Format
Large detector enables highest sensivity

IR-Frame Rate
Analysis of extreme temperature changes and gradients in full frame

Measurement Accuracy
Highly accurate and repeatable measurements

Thermal Resolution
Precise detection of smallest temperature differences

Shortest Integration Time
Accurate temperature measurements of fast processes

Pitch Dimension
Precise measurement of low temperatures and very fast integration times

GigE Vision Compatible
Standard interface for easy integration into existing process environment

The entry-level model ImageIR® 4300 already shows, which qualities are characteristic for the high-end camera series ImageIR® are. Equipped with a cooled focal-plane array photon detector with (320 × 256) IR pixels this camera enables users to choose between detectors made of different material for thermal analyses in the short-wave and mid-infrared spectral range. MCT detectors support snapshot mode.

Recording and storing images with frequencies up to 706 Hz enables you to analyse even fast processes. In addition, the ImageIR® 4300 comes with an impressive thermal resolution up to 0.02 K (20 mK) due to its pixel pitch of 30 µm. 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. That allows to adapt the cameras to almost every measurement and testing task.

Technical Specifications

Spectral range	(3.7 … 4.8) µm
Pitch	30 µm
Detector	MCT
Detector format (IR pixels)	(320 × 256)
Image acquisition	Snapshot
Readout mode	ITR
Aperture ratio	f/2.0
Detector cooling	Stirling cooler
Temperature measuring range	(-40 … 300) °C*, up to 3,000 °C*
Measurement accuracy	± 2 °C or ± 2 %
Temperature resolution @ 30 °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, motorised or automatically*
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	(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

Lenses	Focal length (mm)	FOV (°)	IFOV (mrad)
Wide-angle lens	12	(43.6 × 35.5)	2.5
Standard lens	25	(21.7 × 17.5)	1.2
Telephoto lens	50	(11.0 × 8.8)	0.6
Telephoto lens	100	(5.5 × 4.4)	0.3
Telephoto lens	200	(2.7 × 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 × 46)	180
Close-up for telephoto lens 100 mm	500	(48 × 38)	150
Microscopic lens M = 1.0× (2 versions)	195 / 300	(9.6 × 7.7)	30
Microscopic lens M = 3.0×	22	(3.2 × 2.6)	10

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