ImageIR® 7300

High-end Thermography Camera
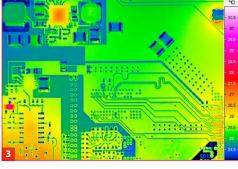

Frame rate up to 630 Hz

INFRATEC.

Europe's leading specialist for infrared sensors and measurement technology

Cooled FPA photon detector with (640 × 512) IR pixels

Frame rate up to 630 Hz, GigE Vision compatible

Snapshot detector, internal trigger interface

Extremely short integration times in the microsecond range

Pixel size up to 2 µm

Thermal resolution better than 0.025 K

1) ImageIR® 7300
2) Software IRBIS® 3
3) Circuit board

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Made in Germany

Spectral range	(2.0 … 5.7) µm
Pitch	15 µm
Detector	MCT or InSb
Detector format (IR pixels)	(640 × 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 … 300) °C
Measurement accuracy	± 2 °C or ± 2 %
Temperature resolution @ 30 °C	Better than 0.025 K
Frame rate (full / half / sub frame)*	Up to 75 / 242 / 630 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 × 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	(235 × 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

Those, who are looking for a powerful thermographic camera to solve fundamental measurement and testing tasks in the fields of industry and science, that offers an impressive geometrical resolution will find the ImageIR® 7300 a perfect match. Its cooled **focal-plane array photon detector provides (640 × 512) IR pixels** and a **pitch of 15 µm** at a constant active detector area. Users, who are testing very small structures on large-scale measurement objects, benefit from substantial plus in terms of efficiency compared to smaller detector formats. In addition, you can choose between **MCT and InSb** detectors.

The camera supports **recording and storing images and sequences with frequencies up to 630 Hz.** An internal trigger interface guarantees for precise, repeatable triggering of correspondingly fast processes. Two respective inputs and outputs are used to control the camera or to generate digital control signals for external devices. Depending on the character of the measurement and testing situation due to its modular design, most diverse thermographic software and high-quality lenses the ImageIR® 7300 is quite easy to adapt to the on-site conditions.

Lenses	Focal length (mm)	FOV (°)	IFOV (mrad)
Wide-angle lens	12	(43.6 × 35.5)	1.3
Standard lens	25	(21.7 × 17.5)	0.6
Telephoto lens	50	(11.0 × 8.8)	0.3
Telephoto lens	100	(5.5 × 4.4)	0.15
Telephoto lens	200	(2.7 × 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 × 46)	90
Close-up for telephoto lens 100 mm	500	(48 × 38)	75
Microscopic lens M = 1.0× (3 versions)	40 / 195 / 300	(9.6 × 7.7)	15
Microscopic lens M = 3.0×	22	(3.2 × 2.6)	5
Microscopic lens M = 8.0×	14	(1.2 × 1.0)	1.9

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