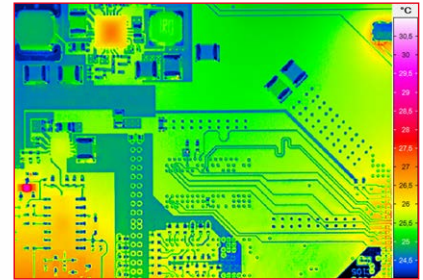




Software IRBIS® 3



Circuit board

# ImageIR® 7300

High-end Thermography Camera – Entry into the VGA Segment

**640  
x  
512**  
Detector

**Detector Format**  
Large detector enables highest sensitivity

**640  
x  
512**  
100 Hz

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

**±2  
%**

**Measurement Accuracy**  
Highly accurate and repeatable measurements

**≤ 20  
mK**

**Thermal Resolution**  
Precise detection of smallest temperature differences

**GigE**

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



**Rotating Filter Wheel and Aperture Wheel**  
Enables measurement tasks with high object temperatures and spectral thermography



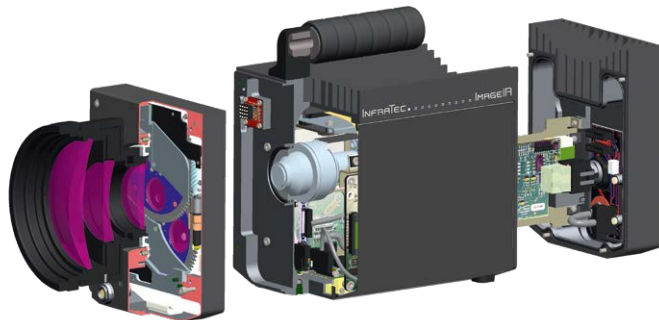
**Motor Focus**  
Precise, fast and remotely controlled; including multiple autofocus functions

Those, who are looking for a powerful thermographic camera to solve demanding 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 (snapshot) provides (640 × 512) IR pixels and a pitch of 15 µm. In addition, you can choose between MCT and InSb detectors.

The camera supports fast storing frame rates with frequencies up to 1,200Hz. 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.

## Technical Specifications

Spectral range	MCT: (1.5 ... 5.5) $\mu\text{m}$ InSb: (1.5 ... 5.7) $\mu\text{m}$
Pitch	15 $\mu\text{m}$
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 ... 300) $^{\circ}\text{C}$ , up to 3,000 $^{\circ}\text{C}^*$
Measurement accuracy	$\pm 2^{\circ}\text{C}$ or $\pm 2\%$
Temperature resolution @ 30 $^{\circ}\text{C}$	MCT: Better than 0.02 K InSb: Better than 0.025 K
Frame rate (full / half / sub frame)*	MCT: Up to 75 / 300 / 1,200 Hz InSb: Up to 100 / 326 / 863 Hz
Window mode	Yes* (full frame / sub frame)
Focus	Manual
Dynamic range	14 bit
Integration time	(1 ... 20,000) $\mu\text{s}$
Rotating filter wheel*	Up to 7 positions
Rotating aperture wheel*	Up to 5 positions
Interfaces	GigE, HDMI*
Trigger	2 IN / 2 OUT, TTL
Analogue signals*, IRIG-B*	2 IN / 2 OUT, no
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)
Analysis and evaluation software	IRBIS $^{\circ}$ 3, IRBIS $^{\circ}$ 3 view, IRBIS $^{\circ}$ 3 plus*, IRBIS $^{\circ}$ 3 professional*, IRBIS $^{\circ}$ 3 control*, IRBIS $^{\circ}$ 3 online*, IRBIS $^{\circ}$ 3 process*, IRBIS $^{\circ}$ 3 active*, IRBIS $^{\circ}$ 3 mosaic*, IRBIS $^{\circ}$ 3 vision*



\* Depending on model

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 ( $\mu\text{m}$ )
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= 1.0 $\times$ (3 versions)	40 / 195 / 300	(9.6 $\times$ 7.7)	15
Microscopic lens M= 3.0 $\times$	22	(3.2 $\times$ 2.6)	5
Microscopic lens M= 8.0 $\times$	14	(1.2 $\times$ 1.0)	1.9

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