

# ImageIR® 10300

Full HD Thermography Camera

## INFRA<sup>TEC</sup>.

Europe's leading specialist for infrared sensors and measurement technology

Cooled FPA photon detector with (1,920 × 1,536) IR pixels

Full-frame rate up to 100Hz, 10 GigE interface

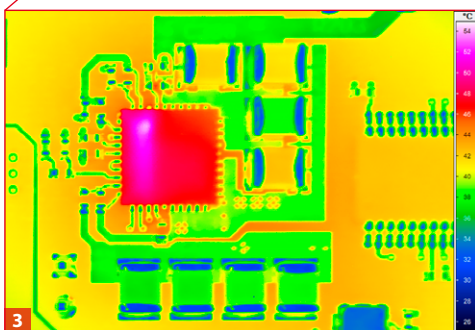
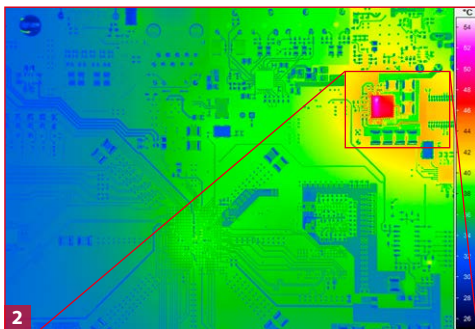
Snapshot detector, internal trigger interface

Complete optical assortment

Pixel size with microscopic lens up to 1.3 μm

Thermal resolution up to 0.03 K

Made in Germany



- 1) ImageIR® 10300 with (1,920 × 1,536) IR pixels
- 2) Format-filling image of circuit board
- 3) Detailed zoom into image



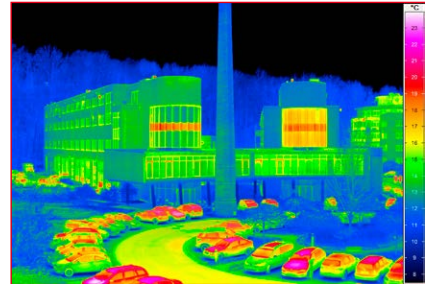
[www.InfraTec.eu](http://www.InfraTec.eu)

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**NEW**



Spectral range	(3.6 ... 4.9) $\mu\text{m}$
Pitch	10 $\mu\text{m}$
Detector	InSb
Detector format (IR pixels)	(1,920 $\times$ 1,536)
Image acquisition	Snapshot
Readout mode	ITR / IWR
Aperture ratio	f/2.0 or f/3.0
Detector cooling	Stirling cooler
Temperature measuring range	(-40 ... 500) $^{\circ}\text{C}$
Measurement accuracy	$\pm 1^{\circ}\text{C}$ or $\pm 1\%$
Temperature resolution @ 30 $^{\circ}\text{C}$	Up to 0.035 K / Up to 0.022 K in high-speed mode
Frame rate (full frame mode / 960 $\times$ 768)	Up to 100 Hz / 300 Hz, (identical FOV)
Window mode	Yes
Focus	Manual, motorised or automatically*
Dynamic range	13 bit
Integration time	(1 ... 20,000) $\mu\text{s}$
Rotating aperture wheel and filter wheel*	Up to 5 positions
Interfaces	10 GigE, HDMI*
Trigger	3 IN / 2 OUT, TTL
Analogue signals*, IRIG-B*	2 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	(241 $\times$ 123 $\times$ 160) mm, 4.7 kg (without lens)
Further functions	High-speed mode*, Multi Integration Time*
Analysis and evaluation software	IRBIS <sup>®</sup> 3, IRBIS <sup>®</sup> 3 view, IRBIS <sup>®</sup> 3 plus*, IRBIS <sup>®</sup> 3 professional*, IRBIS <sup>®</sup> 3 control*, IRBIS <sup>®</sup> 3 online*, IRBIS <sup>®</sup> 3 process*, IRBIS <sup>®</sup> 3 active*, IRBIS <sup>®</sup> 3 mosaic*, IRBIS <sup>®</sup> 3 vision*



\* Depending on model

With its **detector format of (1,920  $\times$  1,536) IR pixels** the Imager<sup>®</sup> 10300 sets new standards in geometric resolution worldwide and creates thermograms with an unprecedented image detail and sharpness. For the first time an infrared camera for civil use with a cooled photon detector permits **full HD images**. In combination with the small **pitch dimension of 10  $\mu\text{m}$** , this ensures that measurement, inspection and surveillance tasks can be solved even more efficiently than before. Everywhere such very fine structures need to be analysed on large-surface measurement objects, for example, users save time, effort and thus costs.

Despite the detector format of about 3 Megapixels, the transfer of **full frame images** achieves a rate **up to 100 Hz**. Thanks to the **10 GigE interface** of the Imager<sup>®</sup> 10300 users can store large amounts of measurement data on a computer in the shortest amount of time. The interface is a part of the modular design of the entire high-end camera series Imager<sup>®</sup>. Individual adjustments like retrofitting a remotely controllable filter and aperture wheel or a motor focus unit can easily be realised. A broad variety of infrared lenses with highest optical performance parameters provides the camera's **outstanding thermal sensitivity**.

Lenses	Focal length (mm)	FOV ( $^{\circ}$ )	IFOV (mrad)
Wide-angle lens	25	(42.0 $\times$ 34.2)	0.4
Standard lens	50	(21.7 $\times$ 17.5)	0.2
Telephoto lens	100	(11.0 $\times$ 8.8)	0.1

Macro and microscopic lenses	Minimum object distance (mm)	Object size (mm)	Pixel size ( $\mu\text{m}$ )
Close-up for telephoto lens 50 mm	300	(115 $\times$ 92)	60
Close-up for telephoto lens 100 mm	500	(96 $\times$ 77)	50
Microscopic lens M=1.0 $\times$	40	(19 $\times$ 15)	10
Microscopic lens M=8.0 $\times$	14	(2.4 $\times$ 1.92)	1.3

Headquarters

**InfraTec GmbH**  
**Infrarotsensorik und Messtechnik**  
 Gostritzer Str. 61 – 63  
 01217 Dresden / GERMANY  
 Phone +49 351 871-8630  
 Fax +49 351 871-8727  
 E-mail thermo@InfraTec.de

USA office

**InfraTec infrared LLC**  
 5048 Tennyson Pkwy.  
 Plano TX 75024 / USA  
 Phone +1 844-226-3722 (toll free)  
 E-mail thermo@InfraTec-infrared.com