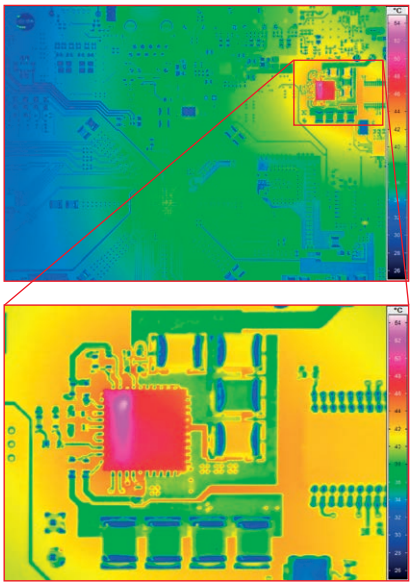
MADE
IN
GERMANY

InfraTec.
Infrarotsensorik und Messtechnik



Format-filling image of circuit board
and detailed zoom into image

ImageIR® 10300

Full HD Thermography Camera – Highest Geometric Resolution

1,920 × 1,536 Detector

Detector Format
Efficient measurement of smallest details on large-scale objects

960 × 768 400 Hz

IR-Frame Rate
Analysis of extreme temperature changes and gradients

±1 %

Measurement Accuracy
Highly accuracte and repeatable measurements

≤ 22 mK

Thermal Resolution
Precise detection of smallest temperature differences

10 GigE

10 GigE Interface
High-speed, long-distance interference proof data transmission

High-speed Mode

High-speed Mode
Increase frame rates and thermal resolution at the same time using binning technology

Complete Optical Assortment
Adaptation of the image geometry to almost every measuring situation

With its detector format of (1,920 × 1,536) IR pixels the ImageIR® 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 permits Full HD images for civil use with a cooled focal-plane array photon detector. In combination with the small pitch dimension of 10 µm, this ensures that measurement, inspection and surveillance tasks can be solved even more efficiently than before. For example, wherever such very fine structures need to be analysed on large-surface measurement objects, users save time, effort and thus costs.

An integrated trigger interface guarantees a repeatable high-precision triggering of quick procedures. Despite the detector format of about 3 Megapixels, the transfer of full frame images achieves a rate up to 113 Hz. In subframe format even considerably higher frame rates are realizable. Thanks to the 10 GigE interface of the ImageIR® 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 ImageIR®. Individual adjustments can easily be realised like retrofitting a remotely controllable filter and aperture wheel or a motor focus unit. A broad variety of infrared lenses with highest optical performance parameters provides the camera's outstanding thermal sensitivity.

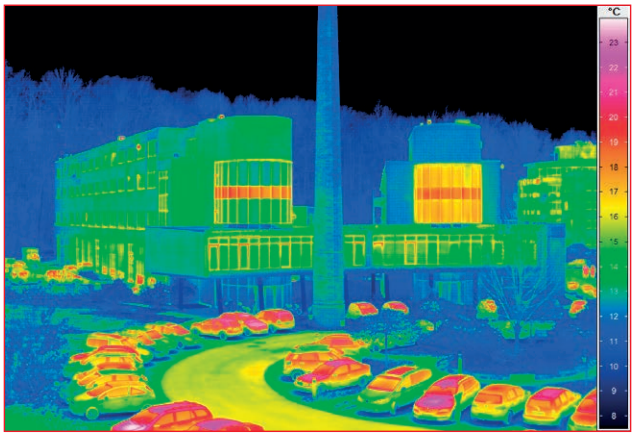
Technical Specifications

Spectral range	(3.6 … 4.9) µm
Pitch	10 µm
Detector	InSb
Detector format (IR pixels)	(1,920 × 1,536)
Image acquisition	Snapshot
Readout mode	ITR / IWR
Aperture ratio	f/2.0
Detector cooling	Stirling cooler
Temperature measuring range	(-40 … 1,200) °C, up to 3,000 °C*
Measurement accuracy	± 1 °C or ± 1 %
Temperature resolution @ 30 °C	Better than 0.035 K / 0.022 K in high-speed mode
Frame rate (full / half / quarter / sub frame)*	Up to 113 / 216 / 396 / 1,915 Hz; High-speed mode: up to 400 / 692 / 1,088 / 2,493 Hz
Window mode	Yes
Focus	Manual, motorised or automatic*
Dynamic range	13 bit
Integration time	(1 … 20,000) µs
Rotating aperture wheel and filter wheel*	Up to 7 positions
Interfaces	10 GigE, HDMI*
Trigger	4 IN / 2 OUT, TTL
Analogue signals*, IRIG-B*	2 IN / 2 OUT, yes
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 × 123 × 160) mm; 4.7 kg (without lens)
Further functions	High-speed mode*, Multi Integration Time*, HighSense*
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	25	(42.0 × 34.2)	0.4
Standard lens	50	(21.7 × 17.5)	0.2
Telephoto lens	100	(11.0 × 8.8)	0.1

Macro and microscopic lenses	Minimum object distance (mm)	Object size (mm)	Pixel size (µm)
Close-up for standard lens 50 mm	300	(115 × 92)	60
Close-up for telephoto lens 100 mm	500	(96 × 77)	50
Microscopic lens M=1.0×	40	(19 × 15)	10
Microscopic lens M=8.0×	14	(2.4 × 1.92)	1.3



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