







Thermographic software IRBIS® 3



Thermal image of a circuit board

## ImagelR<sup>®</sup> 9500

High-end Thermography Camera in HD Image Quality with MCT Detectors



3.7

MegaPixel

**MicroScan** (2,560 × 1,440) IR pixels by

genuine camera hardware

**Detector Format** 



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

Efficient measurement of smallest

details on large-scale objects



Measurement Accuracy Highly accurate and repeatable measurements



Thermal Resolution Precise detection of smallest temperature differences



Focus

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

Motor Focus Precise, fast and remotely controllable; including multiple autofocus functions In regard to InfraTec's wide range of products the ImageIR<sup>®</sup> 9500 thermographic camera is designed for the international market. Its highly sensitive cooled focal-plane array photon detector is based on mercury cadmium telluride (MCT) and provides (1,280×720) IR pixels. The geometrical resolution can even be increased to (2,560×1,440) IR pixels with the MicroScan function. With its outstanding thermal sensitivity up to 0.025 K, users can create low-noise, fine-resolution images using the quadruplication of the image formats due to the innovative, opto-mechanical MicroScan technology. In addition: This model of the high-end ImageIR<sup>®</sup> camera series impresses with extremely short integration times in the microsecond range and very high frame rates of 120 Hz, which increase to 1,517 Hz in sub-frame with ( $320 \times 180$ ) IR pixels.

The ImageIR<sup>®</sup> 9500 is suitable for highly demanding applications in science and industry, object monitoring and microthermographic analysis of extremely small structures. It is equipped with an integrated 10 GigE interface that enables data exchange between camera and computer at a speed of 10 Gbps. Due to the modular concept consisting of optics, detector and interface modules, the camera can be individually configured and optimally adapted to the respective task. The same purpose is served by the range of high-quality, radiometric precision optics, which ranges from telephoto lenses, standard and wide-angle lenses to macro- and microscopic lenses.

## **Technical Specifications**

(3.5 4.8) μm	
12 µm	
MCT	
(1,280×720)	
(2,560×1,440)	
Snapshot	
ITR/IWR	
f/2.0	
Stirling cooler	
(-201,200)°C, up to 3,000°C*	
±1°C or ±1%	
Better than 0.025 K	
Up to 120 Hz/446 Hz/1,517 Hz/16,053 Hz	
Yes	
Manually, motorised or automatic*	
14 bit	
(120,000) μs	
Up to 6 positions	
10GigE, GigE*, 2×CAMLink*, HDMI*	
4 IN/2 OUT, TTL	
2 IN/2 OUT, yes	
1/4" and 3/8" photo thread, 2 ×M5	
24 V DC, wide-range power supply (100 240) V AC	
(-40 70) °C, (-20 50) °C	
IP54, IEC 60529	
(241 ×123 × 160) mm; 4.7 kg (without lens)	
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*	

Lenses Focal length (mm) FOV (°) IFOV (mrad) Standard lens (34.2×19.6) 0.48 25 Telephoto lens (17.5 × 9.9) 0.24 50 Telephoto lens 100 (8.8×4.9) 0.12 Supertelephoto lens 200 (4.4×2.5) 0.06

Macro and microscopic lenses	Object distance (mm)	Object size (mm)	Pixel size (µm
Close-up for telephoto lens 50 mm	300	(92 × 52)	72
Close-up for telephoto lens 100 mm	500	(77×43)	60
Microscopic lens M=1.0×	40	(15 × 9)	12
Microscopic lens M=8.0×	14	(1.9×1.1)	1.5

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