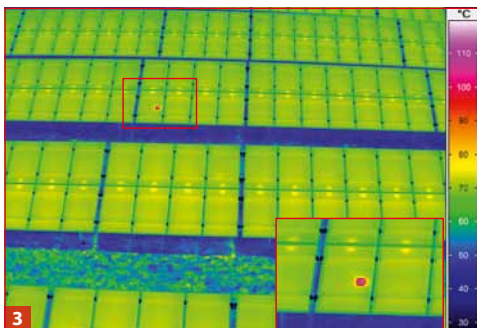
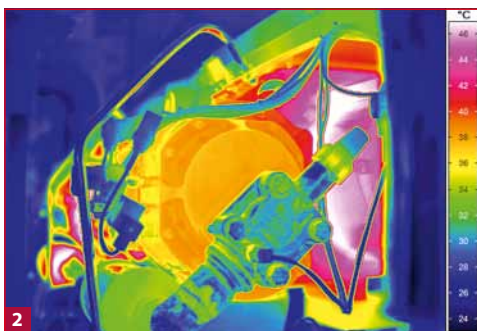


# VarioCAM<sup>®</sup> High Definition

Thermographic Solution for Universal Use

## InfraTec

Europe's leading specialist for infrared sensors and measurement technology



- 1) VarioCAM<sup>®</sup> HD from Jenoptik
- 2) Transmission
- 3) Photovoltaic power plant

**Microbolometer camera with up to (1,024 × 768) IR pixels**

**Optomechanical MicroScan with up to (2,048 × 1,536) IR pixels**

**Frame rate of up to 240 Hz, GigE-Vision interface**

**Integrated light-sensitive digital 8 MP camera**

**5.6" colour TFT display with (1,280 × 800) pixels**

**Laser rangefinder and GPS sensor**

**Wireless camera control and data acquisition via WLAN**

**Made in Germany**

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



**NEW**



Spectral range	(7.5 ... 14) $\mu\text{m}$
Detector	Uncooled Microbolometer Focal Plane Array
Detector format (IR pixels)	(1,024 $\times$ 768) with built-in opto-mechanical high-precision scan unit (2,048 $\times$ 1,536)* (640 $\times$ 480) with built-in opto-mechanical high-precision scan unit (1,280 $\times$ 960)*
Temperature measuring range	(-40 ... 1,200) $^{\circ}\text{C}$ , > 2,000 $^{\circ}\text{C}$ *
Measurement accuracy	$\pm 1^{\circ}\text{C}$ or $\pm 1\%$ *, otherwise $\pm 1.5^{\circ}\text{C}$ or $\pm 1.5\%$
Temperature resolution @ 30 $^{\circ}\text{C}$	Better than 0.03 K*, otherwise better than 0.05 K
Frame rate	Fullframe: 30 Hz (1,024 $\times$ 768), subframe formats*: 60 Hz (640 $\times$ 480) / 120 Hz (384 $\times$ 288) / 240 Hz (1,024 $\times$ 96) Fullframe: 60 Hz (640 $\times$ 480), subframe formats*: 120 Hz (384 $\times$ 288) / 240 Hz (640 $\times$ 120)
Image storage	SDHC-card, GigE-Vision up to 240 Hz, internal real-time storage
Lens mount	Bayonet to comfortably switch objectives, automatic objective detection and data transfer
Focus	Motor-driven, automatic or manual, accurately adjustable, laser-supported autofocus
Zoom	Up to 32x digital, stepless
Digital colour video camera	8 Megapixels, with a LED video light, vision mixer and cross-fade feature
Dynamic range	16 bit
Interfaces	GigE-Vision, DVI-D, C-Video, RS232, Trigger, Analog output*, Digital I/O*, WLAN, USB 2.0, Bluetooth, GPS
Tripod adapter	1/4 " photo thread
Power supply	Lithium-Ion battery (quick rechargeable, with status display), AC adapter
Laser range finder*	Red semiconductor laser, laser safety class 2, range up to 70 m
Display	5.6 " colour TFT display (1,280 $\times$ 800) pixels, daylight suited
Colour viewfinder*	Tiltable colour viewfinder with diopter compensation
Single-handed operation	Intuitive operation with ergonomically arranged function keys and multifunctional joystick, programmable keys
Storage and operation temperature	(-40 ... 70) $^{\circ}\text{C}$ , (-25 ... 50) $^{\circ}\text{C}$
Protection degree	IP54, IEC 529
Impact strength/vibration resistance in operation	25 G (IEC 68 - 2 - 29), 2 G (IEC 68 - 2 - 6)
Dimensions, weight	(210 $\times$ 125 $\times$ 55) mm, 1.7 kg
Automatic functions	Autofocus, permanent autofocus, automatic distance indicator, distance-dependent calculation of permitted pixel size, Autoimage, Autolevel, Min./Max. temperature alarm: visual/acoustic, alarm triggered image storage
Measurement functions	8 free choosable, movable measurement fields/-points, automatic hot/cold spot display: global and internal defined measurement fields, differential temperature measurement: temporally/locally, temperature profile, histogram, differential image, isotherms display
Further functions	EverSharp function (multifocus), shutter-free operation, temperature alarm, image merging, synchronous display of thermal and visual image in real-time
Analysis and evaluation software*	IRBIS <sup>®</sup> 3, IRBIS <sup>®</sup> 3 professional, IRBIS <sup>®</sup> 3 view, IRBIS <sup>®</sup> 3 plus, IRBIS <sup>®</sup> 3 remote HD, 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, FORNAX 2.0

\* Depending on model

For the first time a handheld thermographic microbolometer cameras with a **detector format of (1,024  $\times$  768) IR pixels** is available: The **VarioCAM<sup>®</sup> HD** is manufactured by the **German manufacturer Jenoptik**. It comes with a resolution 2.5 higher than previous high-class models. In connection with the outstanding thermal resolution and **unique precision optics**, crystal clear high-precision thermal images can be taken. Large test objects can be captured thermographically with unprecedented efficiency.

Detector format (IR pixels)		(640 $\times$ 480)	(1,240 $\times$ 768)
Lens	Focal distance (mm)	FOV ( $^{\circ}$ )	FOV ( $^{\circ}$ )
Super wide-angle lens	7.5	(93.7 $\times$ 77.3)	(98.5 $\times$ 82.1)
Wide-angle lens	15	(56.1 $\times$ 43.6)	(60.3 $\times$ 47.0)
Standard lens	30	(29.9 $\times$ 22.6)	(32.4 $\times$ 25.6)
Telephoto lens	60	(15.2 $\times$ 11.4)	(16.5 $\times$ 12.4)
Telephoto lens	120	(7.6 $\times$ 5.7)	(8.3 $\times$ 6.2)
<b>Macro and microscopic lenses</b>	Min. object distance (mm)	Pixel ( $\mu\text{m}$ )	Pixel ( $\mu\text{m}$ )
Close-Up 0.2 $\times$ for 30 mm	69.7	75	51
Close-Up 0.5 $\times$ for 30 mm	32.6	42	29
Close-Up 0.5 $\times$ for 60 mm	78.3	42	28
Microscopic lens M=1.0 $\times$	40	25	17

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