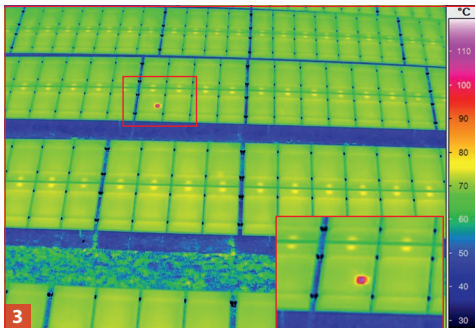
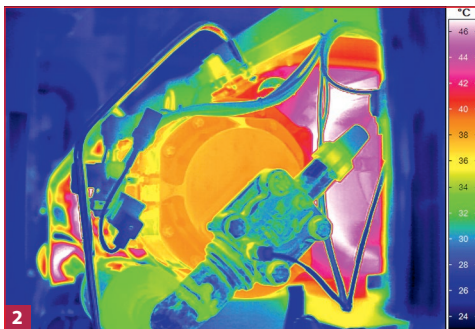


# VarioCAM® High Definition

Thermographic Solution for Universal Use



- 1) VarioCAM® High Definition
- 2) Transmission
- 3) Photovoltaic power plant

## INFRA TEC.

Europe's leading specialist for infrared sensors and measurement technology

- Microbolometer camera with up to (1,024 × 768) IR pixels
- Opto-mechanical 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 range finder and GPS sensor
- Wireless camera control and data acquisition via WLAN

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



Made in Germany



Spectral range	(7.5 ... 14) $\mu\text{m}$
Detector	Uncooled Microbolometer Focal Plane Array
Detector format (IR pixels)	(1,024 × 768), with built-in opto-mechanical high-precision scan unit (2,048 × 1,536)* (640 × 480), with built-in opto-mechanical high-precision scan unit (1,280 × 960)*
Temperature measuring range	(-40 ... 2,000) °C*
Measurement accuracy	$\pm 1$ °C or $\pm 1$ %*
Temperature resolution @ 30 °C	Up to 0.02 K*
Frame rate	Full-frame: 30 Hz (1,024 × 768), sub-frame formats*: 60 Hz (640 × 480) / 120 Hz (384 × 288) / 240 Hz (1,024 × 96) Full-frame: 60 Hz (640 × 480), sub-frame formats*: 120 Hz (384 × 288) / 240 Hz (640 × 120)
Storage media	SDHC Card, external control computer for camera control and data acquisition*
Image storage	Time-, trigger- and temperature controlled recording of 16 bit single frames or image sequences with timestamp, video streaming in MPEG format
Realtime storage*	Computer-aided storage of radiometric sequences by GigE interface with up to 240 Hz
Lens mount	Bayonet to comfortably switch objectives, automatic objective detection and data transfer
Focus	Motor-driven, automatic or manual, accurately adjustable, laser-supported autofocus*
EverSharp function*	Multifocal recording allows for maximum extend of sharp focus
Zoom	Up to 32× digital, stepless
Digital colour video camera	8 Megapixels, LED video light, vision mixer and cross-fade feature
Dynamic range	16 bit
Interfaces; Trigger*	GigE Vision*, DVI-D (HDMI), C-Video, RS232, USB 2.0, WLAN*, Bluetooth*; 2 × digital I/O, 2 × analogue I/O
Tripod adapter	1/4" photo thread
Power supply	Standard Lithium-Ion battery, energy save mode, AC adapter, (12 ... 24) V DC
Integrated microphone and speaker	Voice annotation feature, replay and audio dubbing
Laser range finder*	Semiconductor laser red, laser protection class 2, range up to 70 m
Integrated GPS sensor*	Image integrated storage of position data
Display	5,6" colour TFT display (1,280 × 800) pixel, 170° rotatable and 280° revolvable, daylight suited, incl. flip mirror
Colour viewfinder*	Tilttable colour viewfinder with diopter compensation
Single-handed operation	Intuitive operation with ergonomically arranged function keys and multifunctional joystick, programmable keys
Protection degree; Storage and operation temperature	IP54, IEC 60529; (-40 ... 70) °C, (-25 ... 55) °C
Impact strength; vibration resistance in operation	25 G (IEC 68 - 2 - 29); 2 G (IEC 68 - 2 - 6)
Dimensions; weight	(210 × 125 × 155) mm; 1.6 kg (basic configuration with standard lens)
Automatic functions	Autofocus, permanent autofocus, automatic distance indicator, distance-dependent display of pixel size to avoid geometrically related measurement errors, autoimage, autolevel, min./max. temperature alarm: visual/acoustic, alarm triggered image storage
Measurement functions	8 freely choosable, movable measurement fields/ -points, automatic hot/ cold spot display: globally and internally defined measurement fields, differential temperature measurement, temperature profile, histogram, differential image, isotherms display
Further functions	Camera internal emissivity correction, shutter free operation, use of various colour sets, contrast enhancement, user profile, language selection, user-specific comment data base, digital voice recording
Analysis and evaluation software*	IRBIS® 3, IRBIS® 3 report, IRBIS® 3 view, IRBIS® 3 plus*, IRBIS® 3 professional*, IRBIS® 3 remote HD, IRBIS® 3 control*, IRBIS® 3 online*, IRBIS® 3 process*, IRBIS® 3 active*, IRBIS® 3 mosaic*, IRBIS® 3 vision*, FORNAX 2*, FORNAX 2 plus*

\* Depending on model

Detector format (IR pixels)	(640 × 480)	(1,024 × 768)
<b>Lenses</b>	Focal length (mm)	FOV (°)
Super wide-angle lens	7.5	(93.7 × 77.3)
Wide-angle lens	15	(56.1 × 43.6)
Standard lens	30	(29.9 × 22.6)
Telephoto lens	60	(15.2 × 11.4)
Telephoto lens	120	(7.6 × 5.7)
		(8.3 × 6.2)
<b>Macro and microscopic lenses</b>	Minimum object distance (mm)	Pixel size ( $\mu\text{m}$ )
Close-Up 0.2× for 30 mm	70	75.4
Close-Up 0.5× for 30 mm	33	41.4
Close-Up 0.5× for 60 mm	78	41.6
Microscopic lens M=1.0×	50	25

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