

VarioCAM® HD Z

Infrared Thermography System with 6× Infrared Zoom Lens



- 1) VarioCAM® HD Z – module with zoom lens
- 2) Fuel deposit
- 3) Thermal image of a chemical plant

INFRA^{TEC}.

Europe's leading specialist for infrared sensors and measurement technology

Microbolometer detector with (1,024 × 768) IR pixels

Spectral range (7.5 ... 14) μm

High-performance zoom lens with 25 to 150 mm focal length

Real-time thermography up to 30 Hz full frame rate

Customised installation versions possible

Special protective housings available

Made in Germany



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Spectral range	(7.5 ... 14) μm
Pitch	17 μm
Detector	Uncooled microbolometer focal plane array
Detector format (IR pixels)	(1,024 \times 768)
Aperture ratio	f/1.4
Temperature measuring range	(-20 ... 550) $^{\circ}\text{C}$, up to 1,200 $^{\circ}\text{C}$
Measurement accuracy	$\pm 5^{\circ}\text{C}$ or $\pm 5\%$
Temperature resolution @ 30 $^{\circ}\text{C}$	Better than 0.1 K
Frame rate	Full frame: 30 Hz, sub frames*: 60 Hz (640 \times 480) / 120 Hz (384 \times 288) / 240 Hz (1,024 \times 96)
Storage media	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
Focus	Motor-driven, accurately adjustable
Zoom optical/digital	6 \times stepless / up to 32 \times
Lens focal length	(25 ... 150) mm
Field of view	41.5 $^{\circ}$ @ 25 mm ... 6.6 $^{\circ}$ @ 150 mm (HFOV)
Minimum object distance	500 mm @ 25 mm ... 1,300 mm @ 150 mm
Dynamic range	16 bit
Interfaces	GigE Vision compatible, RS232, Trigger (TTL)
Tripod adapter	1/4" photo thread
Power supply	(12 ... 15) V DC
Storage and operation temperature	(-40 ... 70) $^{\circ}\text{C}$, (-25 ... 50) $^{\circ}\text{C}$
Dimensions (incl. mounting support); weight	(402 \times 141 \times 148) mm; 3.4 kg*
Further functions	Camera internal emissivity correction, use of various colour sets, contrast enhancement, user profile, language selection
Analysis and evaluation software*	IRBIS [®] 3 online, IRBIS [®] 3 plus, IRBIS [®] 3 professional

* Depending on model

The high-resolution thermographic system **VarioCAM[®] HD Z** by InfraTec is the world's first commercially available radiometric microbolometer camera providing a motorised **6 \times infrared zoom lens** for the spectral range of (7.5 ... 14) μm . Equipped with an uncooled FPA detector, it provides brilliant 16 bit **thermal images of the highest quality with (1,024 \times 768) IR pixels**. This combination of HD format thermal images and the lens with continuous zoom opens the door to thermal analysis of processes with an unprecedented attention to detail for the user. The potential range of applications extends from securing large outdoor and safety areas such as chemical plants and fuel deposits to environmental monitoring, animal observation and detection of hotspots as part of early fire detection. All these tasks can be solved precisely due to the automatic image stabilisation even at night and in adverse visibility conditions. The **equipment with high-quality components** supports the efficient **use of the stationary system 24 hours a day**.

Due to different equipment options, the system can be configured just as needed for various tasks: Automatic threshold detection and signalling as well as digital real-time image acquisition via Gigabit Ethernet are just two of the numerous camera functions. In hazardous areas, where installation demands additional requirements to protect the thermographic camera, **ATEX-compliant protective housings** ensure lasting reliability and precision. The efficient **software IRBIS[®] 3 for image data acquisition and evaluation** completes the VarioCAM[®] HD Z as the ideal tool for a wide range of IR monitoring tasks.

Applications for thermal management and monitoring of:

- Industrial plants
- Power plant technology
- Chemical plants
- Mining plants
- Logistics centres
- Port facilities
- Disposal site systems
- Forest plants

Headquarters

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