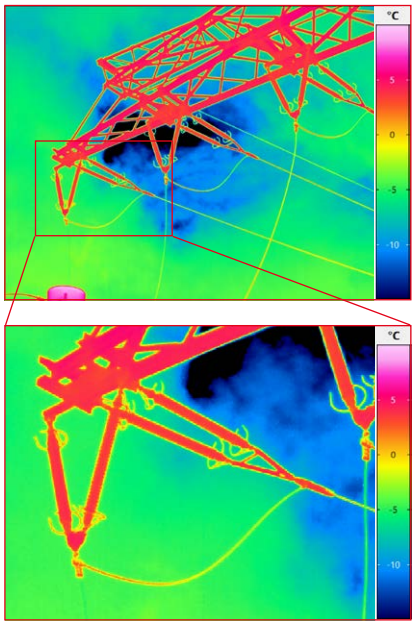
INSTRUMENTS TECHNO TEST

InfraTec. MADE IN GERMANY



Zoom on a high-voltage system

VarioCAM® HD Z

Infrared Thermography System with 6× Infrared Zoom Lens

1,024 × 768 Detector

Detector Format
High resolution thermal images for monitoring large areas

25 – 150 mm

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

≤ 30 mK

Thermal Resolution
Precise detection of smallest temperature differences

Protective Housing
Robust metal housing of various protection classes to a wide range of environmental conditions

GigE

GigE Vision Compatible
Standard interface for reliable integration of the camera into the existing process environment

The high-resolution thermographic system **VarioCAM® HD Z** by InfraTec is the world's first commercially available radiometric microbolometer camera providing a motorised **6× 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 × 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.

Technical Specifications

Spectral range	(7.5 … 14) µm
Pitch	17 µm
Detector	Uncooled microbolometer focal plane array
Detector format (IR pixels)	(1,024 × 768)
Aperture ratio	f/1.4
Temperature measuring range	(-20 … 550) °C, up to 1,200 °C
Measurement accuracy	± 5 °C or ± 5 %
Temperature resolution @ 30 °C	Better than 0.1 K
Frame rate	Full frame: 30 Hz, sub frames*: 60 Hz (640 × 480) / 120 Hz (384 × 288) / 240 Hz (1,024 × 96)
Storage media	External control computer for camera control and data aquisition*
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× stepless / up to 32×
Lens focal length	(25 … 150) mm
Field of view	41.5° @ 25 mm … 6.6° @ 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) °C, (-25 … 50) °C
Dimensions (incl. mounting support); weight	(402 × 141 × 148) mm; 3.4 kg*
Further functions	Camera internal emissivity correction, use of various colour sets, contrast enhancement, user profile, langage selection
Analysis and evaluation software*	IRBIS® 3 online, IRBIS® 3 plus, IRBIS® 3 professional

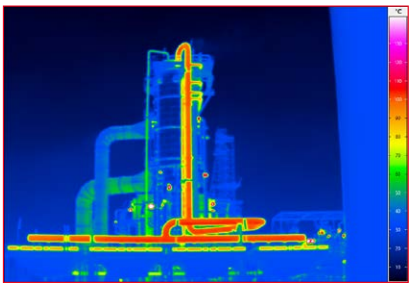
* Depending on model

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

Fuel deposit



Thermal image of a chemical plant

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