

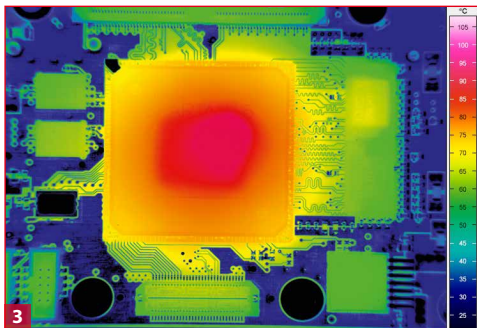
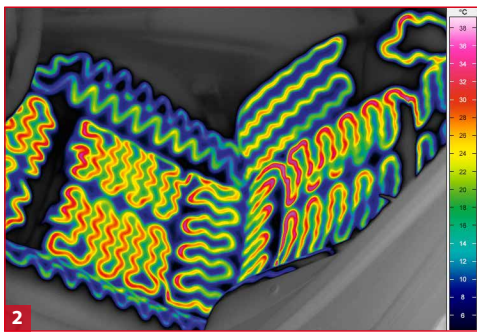


# dB Vib

INSTRUMENTATION

# VarioCAM® HD head

Thermographic Solution for Use in Industry and Research



- 1) VarioCAM® HD head
- 2) Seat heater
- 3) Assembled circuit board

## InfraTec

Europe's leading specialist for infrared sensors and measurement technology

**Microbolometer detector 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**

**Process- and trigger interface**

**Solid light metal housing (IP67)**

**Pixel resolution of up to 17 µm**



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015 698

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 ... 1,200) °C, > 2,000 °C*
Measurement accuracy	$\pm 1$ °C or $\pm 1$ %*, otherwise $\pm 1.5$ °C or $\pm 1.5$ %
Temperature resolution @ 30 °C	Better than 0.03 K*, otherwise better than 0.05 K
Frame rate	Fullframe: 30 Hz (1,024 × 768), subframe formats*: 60 Hz (640 × 480) / 120 Hz (384 × 288) / 240 Hz (1,024 × 96) Fullframe: 60 Hz (640 × 480), subframe formats*: 120 Hz (384 × 288) / 240 Hz (640 × 120)
Image storage	SDHC-card*, GigE-Vision up to 240 Hz
Lens mount	Bajonet or screw-on interface for comfortable lens exchange, auto lens detection and data transmission
Focus	Motorised, automatic or manual, sensitive adjustable, autofocus
Zoom	Up to 32x digital, stepless
Dynamic range	16 bit
Interfaces	GigE-Vision, DVI-D, C-Video, RS232, Trigger, Analog output*, Digital I/O*, WLAN, Bluetooth, Process interface*
Tripod adapter	1/4" photo thread
Power supply	AC adapter, PoE*
Storage and operation temperature	(-40 ... 70) °C, (-25 ... 50) °C
Protection degree	IP54, IP67*, IEC 529
Impact strength/vibration resistance in operation	25 G (IEC 68 - 2 - 29), 2 G (IEC 68 - 2 - 6)
Dimensions, weight	(190 × 90 × 94) mm, 1.15 kg
Further functions	Camera internal emissivity correction, shutter-free operation, temperature alarm
Analysis and evaluation software*	IRBIS® 3, IRBIS® 3 professional, IRBIS® 3 view, IRBIS® 3 plus, IRBIS® 3 remote, IRBIS® 3 online, IRBIS® 3 process, IRBIS® 3 active, IRBIS® 3 mosaic, IRBIS® 3 vision

\* Depending on model

The **thermographic high-resolution system VarioCAM® HD head** is based on latest generation **uncooled microbolometer FPA detectors with (640 × 480) or (1,024 × 768) IR pixels** and was conceived for demanding stationary monitoring and measurement tasks. In combination with the integrated optomechanical MicroScan feature, which was designed for continuous operation, it generates image formats with geometrical resolution of up to **3.1 Megapixels**. The VarioCAM® HD head produces **brilliant high-quality thermographic images with 16 bits**, which allows unprecedented efficiency, especially when capturing smallest details on large object surfaces. Because of the maximum frame rate of 240 Hz, **very quick temperature changes can be recognised reliably**.

The **various sets of equipment** make it easy to adjust the setup to the respective measurement task: The application range includes automatic threshold recognition and signalling, digital real-time image acquisition via GigE, online processing of thermographic data and much more. The industrial light metal housing (IP67) allows easy and inexpensive **installation in tough process environments**.

#### Application examples:

- High-resolution thermography in research and development
- Stationary microthermography
- Security engineering and early fire detection
- Monitoring and controlling of fast-running processes

Detector format (IR pixels)		(640 × 480)	(1,240 × 768)
Lens	Focal distance (mm)	FOV (°)	FOV (°)
Super wide-angle lens	7.5	(93.7 × 77.3)	(98.5 × 82.1)
Wide-angle lens	15	(56.1 × 43.6)	(60.3 × 47.0)
Standard lens	30	(29.9 × 22.6)	(32.4 × 25.6)
Telephoto lens	60	(15.2 × 11.4)	(16.5 × 12.4)
Telephoto lens	120	(7.6 × 5.7)	(8.3 × 6.2)
<b>Macro and microscopic lenses</b>	Min. object distance (mm)	Pixel ( $\mu\text{m}$ )	Pixel ( $\mu\text{m}$ )
Close-Up 0.2x for 30 mm	70	75	51
Close-Up 0.5x for 30 mm	33	42	29
Close-Up 0.5x for 60 mm	78	42	28
Microscopic lens M=1.0x	50	25	17