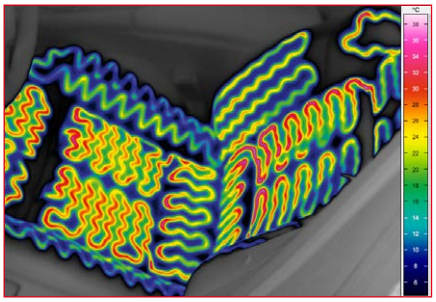
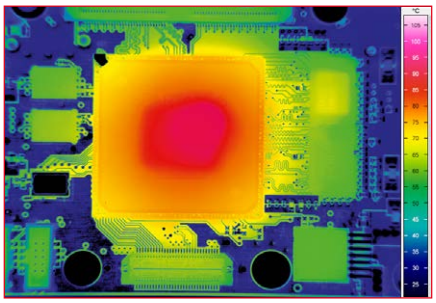
INSTRUMENTS TECHNO TEST

INFRATEC. MADE IN GERMANY



Seat heater



Assembled circuit board

VarioCAM® HD head

Thermographic Solution for Use in Industry and Research

1,024 × 768 Detector
Detector Format
Efficient measurement of smallest details on large-scale objects

3,1 MegaPixel
MicroScan
IR pixels by genuine camera hardware

≥ 20 mK
Thermal Resolution
Precise detection of smallest temperature differences

240 Hz
IR-Frame Rate
Analysis of extreme temperature changes and gradients

GigE
GigE Vision Compatible
Standard interface for easy integration into existing process environment

IP67
Protection Degree
Camera operation under harsh environmental conditions

The **thermographic high-resolution system VarioCAM® HD head** was conceived for demanding stationary monitoring and measurement tasks. 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

Technical Specifications

Spectral range	(7.5 … 14) µm
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)*
Temperature measuring range	(-40 … 2,000) °C*
Measurement accuracy	± 1 °C or ± 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)
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; screw-on interface*
Focus	Motor-driven, automatic or manual, accurately adjustable
Zoom	Up to 32× digital, stepless
Dynamic range	16 bit
Interfaces; Trigger*	GigE Vision*, DVI-D (HDMI), C-Video, RS232, USB 2.0, WLAN*; 2 × digital I/O, 2 × analogue I/O
Tripod adapter	1/4" photo thread
Power supply	AC adapter, (12 … 24) V DC, PoE*
Storage and operation temperature	(-40 … 70) °C, (-25 … 55) °C
Protection degree	IP54, IEC 60529, IP67 with screw-on interface*
Impact strength / vibration resistance in operation	25 G (IEC 68 - 2 - 29), 2 G (IEC 68 - 2 - 6)
Dimensions; weight	(221 × 90 × 94) mm; 1.15 kg (basic configuration with standard lens)
Further functions	Camera internal emissivity correction, shutter free operation, use of various colour sets, contrast enhancement, user profile, language selection
Analysis and evaluation software*	IRBIS® 3, 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*

* Modellabhängig

Detector format (IR pixels)		**(1,024 × 768)**
Lens	Focal length (mm)	FOV (°)
Super wide-angle lens	7.5	(98.5 × 82.1)
Wide-angle lens	15	(60.3 × 47.0)
Standard lens	30	(32.4 × 24.6)
Telephoto lens	60	(16.5 × 12.4)
Telephoto lens	120	(8.3 × 6.2)

Macro and microscopic lenses	Minimum object distance (mm)	Pixel size (µm)
Close-Up 0.2× for 30 mm	137	83
Close-Up 0.5× for 30 mm	47	38
Close-Up 0.5× for 60 mm	100	35
Microscopic lens M=1.0×	50	17

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