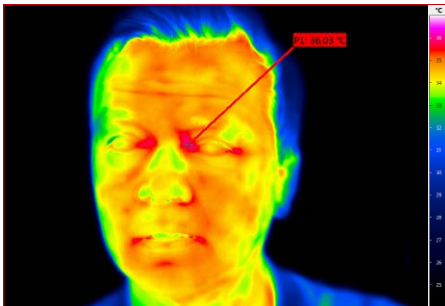


Representation of a circuit board with the thermography software IRBIS® 3



Thermogram for fever detection



# VarioCAM® HDx head S

Universal Infrared Camera for Fixed Installation

**640  
x  
480**  
Detector

**Detector Format**  
High resolution thermal images for temperature measurement

**384  
x  
288**  
60 Hz

**Frame Rate**  
Precise detection of fast temperature changes

**≤ 40  
mK**

**Thermal Resolution**  
Precise detection of smallest temperature differences

**±2  
%**

**Measurement Accuracy**  
Precise and highly repeatable measurements



**Complete Optical Assortment**  
Adaptation of the image geometry to almost every measuring situation

**GigE**

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

The VarioCAM® HDx head S is a state-of-the-art and very compact radiometric thermographic camera designed for stationary use and based on an uncooled microbolometer FPA detector with (640 × 480) IR pixels.

Application-specific configuration of this easy-to-use thermographic camera allows it to be used for surveillance tasks where only small installation spaces are available and continuous operation and automatic operation are required. Its high accuracy of measurement, a comprehensive range of precision lenses and the universal GigE Vision interface concept for digital real-time thermographic data acquisition allow the thermographic camera to be used in a wide variety of applications such as:

- Research and development
- Production control and process monitoring
- Quality assurance
- Material testing
- Micro-thermography
- Safety engineering and early fire detection
- Flight thermography
- Medicine

The VarioCAM® HDx head S becomes an universally applicable thermography system, due to various accessories such as protective housings for outdoor applications and various software packages for data acquisition, further processing and documentation.

## Technical Specifications

Spectral range	(7.5 ... 14) $\mu\text{m}$
Detector	Uncooled Microbolometer Focal Plane Array
Detector format (IR pixels)	(640 $\times$ 480)
Temperature measuring range	(-40 ... 600) $^{\circ}\text{C}$
Measurement accuracy	$\pm 2^{\circ}\text{C}$ or $\pm 2\%$
Calibration range change	Motorised
Temperature resolution @ 30 $^{\circ}\text{C}$	Better than 0.04 K
Frame rate	Full frame: 30 Hz (640 $\times$ 480); sub frame*: 60 Hz (384 $\times$ 288 )
Storage media	External computer for camera control and data acquisition
Image storage	Time, trigger and temperature controlled recording of 16 bit single images or sequences with time stamp
Lens mount	Threaded
Focus	Motor-driven, automatic or manual, accurately adjustable
Zoom	Up to 32 $\times$ digital, stepless
Dynamic range	16 bit
Interfaces	GigE Vision, RS232
Trigger*	2 $\times$ digital IO, 1 $\times$ Sync In, 2 $\times$ Analog Out
Tripod adapter	1/4" photo thread
Power supply	AC adapter, (12 ... 24) V DC
Power consumption	8 W
Storage and operation temperature	(-40 ... 70) $^{\circ}\text{C}$ , (-25 ... 55) $^{\circ}\text{C}$
Humidity operation / storage	Rel. humidity (10 ... 95) %, non-condensing
Protection degree	IP40
Impact strength, vibration resistance in operation	25 G (IEC 60068 - 2 - 27), 2 G (IEC 60069 - 2 - 6)
Dimensions, weight	(130 $\times$ 90 $\times$ 100) mm; 1.0 kg (with standard lens)
Analysis and evaluation software*	IRBIS $^{\circ}$ 3, IRBIS $^{\circ}$ 3 plus, IRBIS $^{\circ}$ 3 professional, IRBIS $^{\circ}$ 3 view, IRBIS $^{\circ}$ 3 remote HD, IRBIS $^{\circ}$ 3 online, IRBIS $^{\circ}$ 3 process, IRBIS $^{\circ}$ 3 vision, IRBIS $^{\circ}$ 3 active, IRBIS $^{\circ}$ 3 mosaic

\* depending on model

Lens	Focal lens (mm)	FOV ( $^{\circ}$ )	IFOV (mrad)
Wide-angle lens	10	(57.2 $\times$ 44.4)	1.7
Standard lens	20	(32.7 $\times$ 24)	0.85
Telephoto lens	40	(15.5 $\times$ 11.6)	0.43

Additional infrared interchangeable lenses are available on request.



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