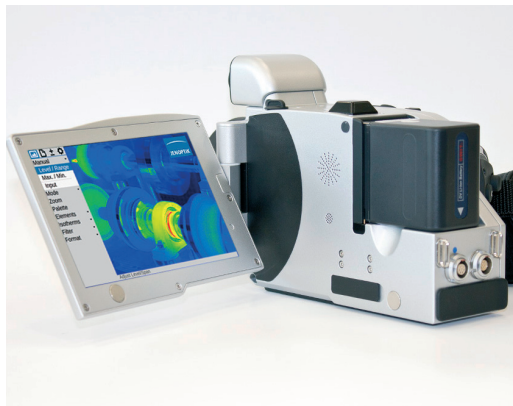




VarioCAM® HD basic Infrared Cameras

Precision Thermography with up to 1280 × 960 IR Pixel Resolution



High Definition Infrared made in Germany:
Thermographic precision you can rely on.

VarioCAM® HD basic outputs detailed, fully radiometric images with a thermal resolution of **40 mK NETD**.

Operating at a frame rate of **30 Hz** at **640 x 480 IR pixel resolution**, the camera delivers high-quality thermograms fast and in real-time – allowing to record radiometric image series and videos.

Dynamic Resolution Enhancement mode available for mobile, hand-held camera operation boosts the image resolution by a factor of 4 up to 1280 x 960 pixels. This mode is suitable for data display and analysis on your PC using Vario-Capture software included with VarioCAM® HD basic.

VarioCAM® HD basic features geo-referencing in connection with the **built-in GPS** module. For immediate image control the camera offers a robust and extra-large **1280 × 800 pixel 5.6" TFT display**.

An optional laser rangefinder provides distance measurement and Laser assisted Auto Focus functionality, enabling precise measurement results also for critical objects.

Versatile industry-proof standard interface options, including wireless and GigE-Vision allow for easy remote imaging.

Applications:

- Industrial and scientific research & development
- Predictive and preventive maintenance
- Building inspection

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Specifications

VarioCAM® HD Basic	
Detector type	Uncooled microbolometer (Focal Plane Array)
Image resolution [IR detector pixel]	640 × 480
Image rate (@ max. image resolution)	30 Hz
Subframe modes & frame rates (optional)	384 × 288 (60 Hz)
Spectral range	7.5 µm ... 14 µm
Temperature measurement range	-40 °C ... +600 °C
Thermal resolution [NETD]	≤ 40 mK (temporal NETD @ smooth 1)
Measurement accuracy	± 2 K or ± 2 %
A/D conversion	16 bit
Laser pointer	Red Laser class 2
Laser rangefinder (optional) ¹	Range: 70 m Accuracy: ± 1.5 mm 635 nm (red) Laser Class 2 Laser assisted Auto Focus
Display	Extra-large 5.6" color TFT display 1280 × 800 pixel resolution Suitable for daylight operation
Viewfinder	Tiltable LCoS color viewfinder 800 x 600 pixel
Geo-localization	Built-in GPS for geo-referencing
Digital VIS camera	CMOS color camera Up to 8 megapixel resolution for image & video recording 32x digital zoom
Audio	Integrated microphone and loudspeaker for image annotations Bluetooth audio headset
Image / video storage	SDHC memory card
Interfaces for image transfer	GigE-Vision DVI-D C-Video WLAN (optional)
Interfaces for camera control	GigE-Vision RS-232 Trigger Bluetooth (optional)
Power supply	External: 12 VDC ... 24 VDC Battery: standard Li-Ion video camera battery
Operating temperature	-25 °C ... +55 °C (operational)
Storing temperature	-40 °C ... +70 °C
Humidity	Relative humidity 10% ... 95%, non-condensing
Shock	Operational: 25G, IEC 68-2-27
Vibration	Operational: 2G, IEC 68-2-6
Protection class	IP54
Dimensions (with standard 1.0/20 mm lens)	220 mm × 125 mm × 155 mm [L × W × H]
Weight (with standard 1.0/20 mm lens)	1.5 kg
Dynamic Resolution Enhancement	4x image resolution, max. 1280 × 960 pixel (<i>hand-held recording, image output via VarioCapture</i>)
Measurement functions (selection)	Multiple measurement spots & ROIs, Hot/cold spot detection, Isotherms, Differences
Automatic functions (selection)	Focus, Image, Level, Range, NUC, Lens recognition, Image optimization, Alarm sequence
Correction functions	Emissivity (manually or material table), Transmissivity, Ambient temperature, Humidity (optional)
Ergonomics	Camcorder with handle

¹) actual range depending on measurement conditions (e.g. target surface and ambient conditions)

Available lenses and converters with IP54-proof bayonet mount	Type	f / Focal length	HFOV × VFOV	Minimum focus distance
	Wide angle	1.0 / 10 mm	xxx	xxx
	Standard	1.0 / 20 mm	30° × 22°	500 mm
	Telephoto	1.0 / 40 mm	xxx	xxx

It is our policy to constantly improve the design and specifications. Accordingly, the details represented herein cannot be regarded as final and binding.



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