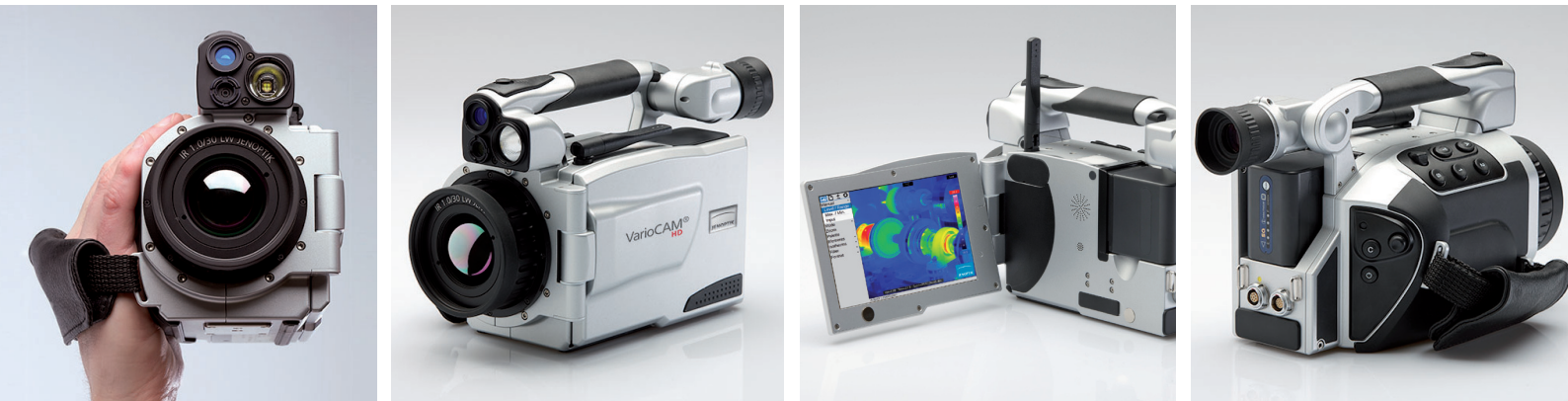




VarioCAM® HD 1024 LWIR Infrared Cameras

Precision Thermography with up to 2048×1536 IR Pixels Resolution



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

If demanding thermal imaging is your assignment, the VarioCAM® HD uncooled thermographic cameras will be your first choice solution.

VarioCAM® HD 1024 outputs most detailed fully radiometric images of **up to 2048×1536 pixel** spatial resolution enabled by Jenoptik's **Resolution Enhancement technology** and offers a thermal resolution of **50 mK NETD**. Operating at a frame rate of up to 30 Hz, the camera provides a **real-time** image resolution of **1024×768 pixel** - suitable for recording radiometric image series and videos.

VarioCAM® HD is the world's first thermography camera featuring a built-in **laser rangefinder** for optimal temperature

correction, autofocus support and precise 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** and an tiltable viewfinder. Versatile industry-proof standard interface options, including wireless and GigE-Vision allow for easy remote imaging.

Matching a broad variety of thermal imaging applications, a **great choice of high quality infrared optics** is available – of course, also made in Germany, manufactured by Jenoptik.

Applications:

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

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Specifications

	VarioCAM® HD 1024 inspect	VarioCAM® HD 1024 research
Detector type	Uncooled microbolometer (Focal Plane Array)	
Image resolution [pixel]	1024 × 768	2048 × 1536 (RE mode) 1024 × 768
Image rate (@ max. image resolution)	30 Hz	30 Hz 30 Hz
Subframe modes & frame rates (optional)	640 × 480 (60 fps) 384 × 288 (120 fps) 1024 × 96 (240 fps)	
Spectral range	7.5 µm ... 14 µm	
Temperature measurement range ¹	-40 °C ... +1,200 °C High temperature option: up to 2,000 °C	
Thermal resolution [NETD]	≤ 50 mK	
Measurement accuracy	± 1.5 K or ± 1.5 %	
Dynamic range	16 bit	
Laser rangefinder	Accuracy: ± 1.5 mm Range: 70 m Wavelength: 635 nm (red) Laser class: 2	
Focus	Laser rangefinder supported autofocus Passive autofocus Motorized manual focus	
Display	Extra-large 5.6" color TFT display 1280 × 800 pixel resolution Suitable for daylight operation	
Viewfinder	Tiltable LCoS color viewfinder display 800 × 600 pixel resolution	
Geo-localization	Built-in GPS for geo-referencing	
Digital VIS camera	CMOS color camera up to 8 Megapixel resolution for image and video recording	
Audio	Integrated microphone and loudspeaker for image annotations	
Image / video storage	SDHC memory card	
Interfaces for image transfer	GigE-Vision DVI-D G-Video WLAN (optional)	
Interfaces for camera control	GigE-Vision RS232 Trigger USB 2.0 Analog output WLAN 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 68-2-29	
Vibration	Operational: 2G, IEC 68-2-6	
Protection class	IP54	
Dimensions (with standard 1.0/30 mm lens)	210 mm × 125 mm × 155 mm [L × W × H]	
Weight (with standard 1.0/30 mm lens)	1.7 kg	
Measurement functions (selection)	Multiple measurement spots & ROIs Hot/cold spot detection Isotherms Profiles Differences	
Automatic functions (selection)	Focus Image Level Range NUC Lens recognition Image optimization Alarm sequence	
Correction functions	LDC™ - Laser rangefinder based Distance Correction Emissivity (manual or material table) Transmissivity Ambient temperature Humidity (optional)	

¹⁾ Overall range available for measurement and visualization. Four discrete sensitivity levels are used.

Available lenses and converters with IP54-proof bayonet mount	Type	f / Focal length	HFOV × VFOV	Minimum focus distance
	Super wide angle	1.0 / 7.5 mm	136° × 101°	200 mm
	Wide angle	1.0 / 15 mm	68° × 51°	500 mm
	Standard	1.0 / 30 mm	32° × 25°	750 mm
	Telephoto	1.0 / 60 mm	16° × 12°	2,000 mm
	Super telephoto	1.0 / 120 mm	8.1° × 6.2°	6,000 mm
	M 0.2× Close-up lens for Standard lens		IFOV: 81 µm	Working distance: 137 mm
	M 0.5× Close-up lens for Standard lens		IFOV: 32 µm	Working distance: 47 mm
	M 0.5× Close-up lens for Telephoto lens		IFOV: 35 µm	Working distance: 100 mm



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