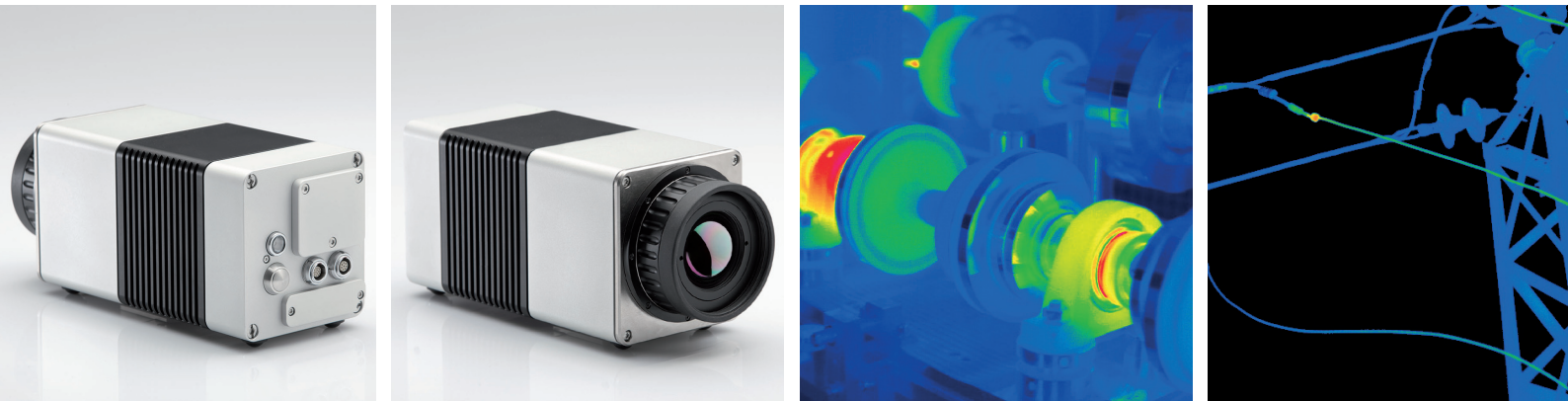




IR-TCM HD 1024 LWIR Infrared Cameras

Precision Thermography with up to 2048 × 1536 IR Pixels Resolution



Thermal imaging precision you can rely on.

If demanding thermal imaging is your assignment, the IR-TCM HD series of uncooled infrared thermography stationary cameras is your first choice solution.

For visualizing or accurately measuring heat distributions the uncooled IR-TCM HD 1024 camera module outputs detailed radiometric images of **up to 2048 × 1536 IR pixel** spatial resolution and a thermal resolution of **50 mK NETD**. Operating at a frame rate of up to 30 Hz, the camera modules offer a **real-time image resolution of 1024 x 768 pixel**.

Versatile **industry-proof standard interface** options, including wireless and **GigE-Vision** allow for easy integration into individual system solutions.

The cameras can be used for a broad variety of thermal imaging applications, since a **great choice of high quality infrared optics** is available - also made in Germany, manufactured by Jenoptik.

Applications:

- Industrial and scientific research & development
- Predictive and preventive maintenance
- Process control and machine vision
- Aerial imaging
- Security engineering and fire detection
- Thermal inspection systems
- Military engineering¹

IR-TCM HD 1024 Stationary LWIR Infrared Cameras

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Specifications


	IR-TCM HD 1024	IR-TCM HD 1024 RE	
Detector type	Uncooled microbolometer (Focal Plane Array)		
Image resolution [pixel]	1024 × 768	2048 × 1536 (RE mode ³)	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 ²	-40 °C ... +1,200 °C High temperature option: up to 2,000 °C		
Temperature resolution [NETD]	≤ 50 mK		
Measurement accuracy	± 1.5 K or ± 1.5 %		
Dynamic range	16 bit		
Interface options for image transfer	GigE-Vision DVI-D C-Video WLAN		
Interface options for camera control	GigE-Vision RS232 Trigger Analog output Digital I/O WLAN Bluetooth		
Power supply	12 VDC ... 24 VDC		
Operating temperature range	switch on: -15 °C ... +50 °C operating: -25 °C ... +50 °C		
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 (bayonet lens mount) or IP67 (lens thread mount)		
Dimensions (housing, without lens)	190 mm × 90 mm × 94 mm [L × W × H]		
Weight (housing, without lens)	1.15 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	Emissivity (manual or material table) Transmissivity Ambient temperature Humidity (optional)		

¹) IR-TCM HD 1024 is designed and intended for standard civil applications in the fields of industrial automation and R&D, security engineering and emergency services.

Special module design & configuration for military applications is available on request. Please contact us for more information.

²) Overall range available for measurement and visualization. Four discrete sensitivity levels are used.

³) RE: Jenoptik's opto-mechanical *Resolution Enhancement* technology

Available lenses and converters with IP54-proof bayonet mount or IP67-proof thread 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	

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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