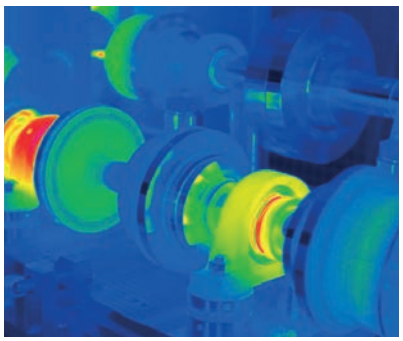
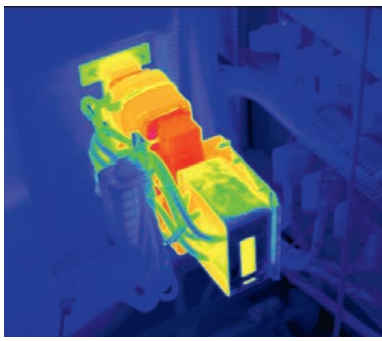
JENOPTIK

IR-TCM HD 1024 Thermographic Infrared Cameras

Accurate thermal imaging with up to 2048 × 1536 pixel resolution



Thermal imaging precision you can rely on.

If demanding thermal imaging is your assignment, the new IR-TCM HD series of uncooled infrared thermography camera modules 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 pixel** spatial resolution and a thermal resolution of **50 mK NETD**. Operating at a frame rate of up to 30 Hz, the camera modules offers 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. 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
- Process control and machine vision
- Aerial imaging
- Security engineering and Fire detection
- Thermal inspection systems
- Military engineering[1]

IR-TCM HD 1024 Stationary Thermography Cameras

Accurate thermal imaging with up to 2048 × 1536 pixel resolution

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	n.s. [4]	30 Hz
Subframe modes & frame rates (optional)	640 × 480 (60 fps) I 384 × 288 (120 fps) I 1024 × 96 (240 fps)		
Spectral range	7.5 µm ... 14 µm		
Temperature measurement range [2]	-40 °C ... +1,200 °C I 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 I DVI-D I C-Video I WLAN		
Interface options for camera control	GigE-Vision I RS-232 I Trigger I Analog output I Digital I/O I WLAN I 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 I Hot/cold spot detection I Isotherms I Profiles I Differences		
Automatic functions (selection)	Focus I Image I Level I Range I NUC I Lens recognition I Image optimization I Alarm sequence		
Correction functions	Emissivity (manual or material table) I Transmissivity I Ambient temperature I Humidity (option)		
Available lenses	Super-Wide-Angle: 1.0 / 7.5 mm (FOV 98° × 82°, min. focus distance 100 mm) Wide-Angle: 1.0 / 15 mm (FOV 60° × 47°, min. focus distance 200 mm) Standard: 1.0 / 30 mm (FOV 32° × 24°, min. focus distance 300 mm) Telephoto: 1.0 / 60 mm (FOV 16° × 12°, min. focus distance 2,000 mm) Super-Telephoto: 1.0 / 120 mm (FOV 8° × 6°, min. focus distance 4,000 mm)		
Lens mount options	IP54 proof bayonet mount or IP67 proof thread mount		

[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
[4]) Single frame acquisition mode only. Frame rate for RE image series not specified yet. Live image display refresh rate 30 Hz.

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

JENOPTIK I Defense & Civil Systems
ESW GmbH - Sensor Systems
Pruessingstrasse 41 I 07745 Jena I Germany
Phone +49 3641 65-3942 I Fax -3494
infraredtechnology.dcs@jenoptik.com
www.jenoptik.com/infraredtechnology

Sales North / South Americas
JENOPTIK Advanced Systems, LLC
16490 Innovation Drive I Jupiter FL 33478 I USA
Phone +1 561 881-7400 ext. 1230 I Fax +1 561 88-1947
jdi.sales@jenoptik-inc.com

025007-405-004-04-99-14-0913-en