



IR-TCM 640 compact OEM IR Camera Module

High resolution thermal images with 640 × 480 pixel



OEM camera module for VGA resolution in real-time with most flexible connectivity

Whether visualizing or measuring heat distributions, the new uncooled OEM IR camera module IR-TCM 640 *compact* outputs stunning infrared images of 640 × 480 pixel resolution with a sharpness and distinctness so far unknown.

What's more, it does so in real-time! With its VGA image format, the module with uncooled microbolometer provides a long-missed imaging quality for image recognition and machine vision purposes. This can also work out helpfully in security environments since the module's extremely high image resolution capability can handle large enough data volumes for wide-angle objective lenses to monitor great visual fields.

Equipped with latest standard interfaces as Gigabit-Ethernet, CameraLink, FireWire, S-/C-Video and VGA, the camera module can easily be integrated into a variety of applications in little time.

Applications:

- Security engineering
- Detection of persons, animals, vehicles or boats
- Fire detection
- Property monitoring
- Aerial inspection
- Machine vision and process monitoring
- Thermal inspection systems
- Military engineering¹

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Specifications

	IR-TCM 640 compact
Detector type	Uncooled microbolometer (Focal Plane Array)
Image format	640 × 480 pixel
Spectral range	7.5 μm ... 14 μm
Range for measuring / visualization ²	-40 °C ... +300 °C Option: up to +2000 °C
Temperature resolution	NETD < 70 mK With filtering: NETD < 30 mK
Measurement accuracy ³	± 1.5 K (0 °C ... 100 °C) otherwise ± 2 K, ± 2%
Dynamic range	16 bit
Image rate	50 Hz (PAL) or 60 Hz (NTSC)
Interfaces	Gigabit-Ethernet, CameraLink, IEEE-1394 (FireWire), S-/C-Video, VGA, RS-232, Trigger
Power supply	9 VDC ... 24 VDC
Operating temperature	-15 °C ... +45 °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
Dimensions (without lens)	109 mm × 100 mm × 100 mm
Weight (without lens)	675 g
Options	+ Radiometric calibration -40 °C ... +300 °C + High temperature calibration up to 1,200 °C or 2,000 °C + Implementable image processing functionality (e.g. zoom, auto-image, hot- & cold-spot-detection, measurement spots, measurement value correction, etc.) + Remote control and image capturing software + Image analysis software + Lenses: <ul style="list-style-type: none">- Standard lens: 1.0 / 30 mm (FOV 30° × 23°)- Telephoto lens 1: 1.0 / 50 mm (FOV 18° × 14°)- Telephoto lens 2: 1.0 / 100 mm (FOV 9.5° × 7.3°)- Other lenses or Customer-specific lenses on request

¹⁾ IR-TCM 640 compact 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 or visualization.

³⁾ For measuring camera modules only.

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