



TarisIR® mini

When Size Matters!

**640
x
480**
Detector

Detector Format

Uncooled microbolometer FPA detector;
12 μm pitch

**640
x
480**
50 Hz

IR-Frame Rate

Analysis of extreme temperature changes
and gradients in full frame

**± 2
%**

Measurement Accuracy

Highly accurate and repeatable
measurements

**≥ 20
mK**

Thermal Resolution

Precise detection of smallest
temperature differences

GigE

GigE Interface

For loss-free real-time data transmission
and analysis

Case

Rugged Light Metal Housing

Easy and economical installation

Designed for universal use, the compact camera TarisIR® mini with the corresponding IRBIS® software from InfraTec enables entry-level access to stationary thermography at an excellent price-performance ratio. The radiometrically calibrated infrared camera is based on an uncooled microbolometer FPA detector of the latest generation with (640 \times 480) IR pixels and a pixel pitch of only 12 μm . In combination with the high thermal resolution of 20 mK, the camera provides unprecedented image quality in this camera segment with exceptionally sharp detail.

The TarisIR® mini is designed for uncompromising continuous operation. It provides reliable thermographic real-time image data that can be operated in any position with a full-frame rate of up to 50 Hz. The camera measures in the long-wave atmospheric window of (8 ... 14) μm , making it well suited for monitoring applications in outdoor areas. Algorithms specially developed for this detector technology in combination with a very comprehensive and sophisticated calibration process ensure precise results with a measurement accuracy of 2 %, even under difficult measurement conditions.

Technical Specifications

Spectral range	(8 ... 14) μm
Pitch	12 μm
Detector	Uncooled microbolometer Focal Plane Array detector
Detector format (IR pixels)	(640 × 480)
Temperature measuring range	(-40 ... 600) °C
Measuring accuracy	$\pm 2 \text{ K}$ or $\pm 2 \text{ %}^{**}$
Temperature resolution @ 30 °C	0.02 K
Frame rate	50 Hz or < 9 Hz
Focus	Manual
Dynamic range	16 bit
Interfaces	GigE-Vision (RJ45), RS232
Trigger	2x IN / OUT
Tripod adapter	1/4" photo thread
Power supply	(9 ... 36) VDC or PoE
Power consumption	Approx. 2.2 W @12 V, 2.7 W @PoE
Storage and operation temperature	(-40 ... 70) °C, (-25 ... 50) °C
Humidity (operation and storage)	Relative humidity (10 ... 95) %, not condensing
Housing, Protection degree	Light metal housing, IP40, IP67 (lens frontside)
Dimensions; weight (without lens)	OEM module: (50 × 30 × 30) mm; 66 g Camera: (50 × 55 × 55) mm; 220 g
Further functions	In-camera emissivity correction, color chart, 3 ROI, 8 Isotherms, 4 user configurations (plus a factory setting)
Analysis and evaluation software	IRBIS® 3, IRBIS® 3 view, IRBIS® 3 plus*, IRBIS® 3 professional*, IRBIS® 3 control*, IRBIS® 3 online*, IRBIS® 3 process*, IRBIS® 3 active*, IRBIS® 3 mosaic*, IRBIS® 3 vision* SDK V4* (LabVIEW*, MATLAB*)

* Depending on model
** In selected measurement ranges

The extremely small and robust light metal housing and the lightweight design of the camera module enable simple integration. In system environments with installation situations with limited space, high dynamic loads and adverse environmental conditions, small size and lightweight design are key – and the TarisIR® mini offers both! Depending on the application, the module can be combined with different lenses and thus optimally configured to suit the measuring task. The IP67 protection degree on the lens frontside facilitates integration even in adverse application conditions.



Lenses	Focal length (mm)	Focusing range / with close focus (mm)	FOV (°)	IFOV (mrad)
Ultra-wide-angle lens	4.9	(150 ... ∞)	(95 × 70)	2.45
Wide-angle lens	6.2	(350 ... ∞) / (175 ... ∞)	(75 × 55)	1.94
Wide-angle lens	9.2	(500 ... ∞) / (125 ... ∞)	(50 × 37)	1.30
Standard lens	13.6	(500... ∞) / (125 ... ∞)	(32 × 24)	0.88
Telephoto lens	25	(1,000 ... ∞) / (250 ... ∞)	(17.6 × 13.2)	0.48



TarisIR® mini for Integration Applications

The radiometric compact camera is characterised by very low power consumption and can be conveniently supplied with power via Ethernet (PoE). Thanks to the individual configurability and extremely small design TarisIR® mini is predestined for use in OEM solutions. It can be easily integrated into machines, systems and devices for monitoring and measuring tasks in process optimisation and quality assurance. The GenICam compatibility and included Software Development Kit (SDK) make this significantly easier.

The modern interface concept of the TarisIR® mini enables convenient camera control and data acquisition. Recordings can be saved and/or processed on a PC in real time at frame rates of up to 50 Hz via the GigE interface.

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