



ImageIR® c7300

Focus on the Essentials – Compact, Capable, Cost-effective

**640
x
512**
Detector

Detector Format
Large detector enables
highest sensitivity

**640
x
512**
150 Hz

IR-Frame Rate
Analysis of extreme temperature
changes and gradients in full frame

**≤ 15
mK**

Thermal Resolution
Precise detection of smallest
temperature differences

t_{int}

Integration Time
Accurate temperature measurements
of fast processes

MTTF
28,000 h

Longlifecooler
Enables the maintenance-free use
over long operating times

Trigger

Process and Trigger Interface
Highly precise repeatable data recording;
time- and event-controlled

Rotating Filter Wheel and Aperture Wheel

Enables measurement tasks with high object
temperatures and spectral thermography

The **cameras in the Compact-Line** combine reliable thermography with a compact design and high cost-effectiveness. With predefined features, compatible lenses, and industry-standard interfaces, they can be easily integrated into systems and processes via plug and play. Precise temperature data, low weight, and an attractive price-performance ratio make them ideal for a wide range of tasks.

Whether for **in-line quality control** or **demanding monitoring in continuous operation**, the ImageIR® c7300 delivers precise thermographic data exactly where it's needed. The **high-performance cooled MWIR detector** used enables extremely short integration times. Due to **snapshot mode**, even moving test objects and dynamic processes can be captured without distortion or interruption.

The ImageIR® c7300 is particularly well-suited for continuous commercial use: Its heavy-duty, **long-life cooler** – with an **average service life of 28,000 hours** – enables reliable, cost-effective measurements in 24/7 operation. The **compact size, a wide range of mounting options, and low weight** make it easy to **integrate** the ImageIR® compact into systems, test benches, and automation solutions.

Technical Specifications

Spectral range	(1.5 ... 5.7) μm
Pitch	15 μm
Detector	InSb
Detector format (IR pixels)	(640 × 512)
Image acquisition	Snapshot
Readout mode	ITR/IWR
Aperture ratio	f/3.0
Detector cooling	Stirling cooler, MTTF > 28,000 h
Temperature measuring range	(-10 ... 1,500) °C, up to 3,000 °C*
Measurement accuracy	± 2 °C or ± 2 %
Temperature resolution @ 30 °C with 30 Hz	≤ 0.015 K
Frame rate (full / half / quarter / sub frame)*	Up to 150 / 570 / 1,020 / 5,000Hz
Focus	Manually, optional motorised
Dynamic range	14 bit
Integration time	(0.1 ... 60,000) μs
Interfaces	GigE, 10 GigE*, Displayport, USB 3, WiFi*, GPS*
Analogue signals*, IRIG-B*	No, yes
Trigger	2 IN (Digital: LVTTTL, TTL, 24V), 2 OUT (Digital: LVTTTL, TTL)
Tripod adapter	1/4" + 3/8" photo thread, 2 × M5
Power supply	Wide-range input (9 ... 38) V DC, (100 ... 240) V AC, PoE
Storage and operation temperature	(-40 ... 70) °C, (-20 ... 50) °C
Protection degree	IP50, IEC 60529
Dimensions; weight	(211 × 100 × 125) mm, Custom sizes available upon request; 3 kg (without lens)
Further functions	Multi Integration Time
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*

* Depending on model

The **integrated 5 position filter wheel** provides a standard measurement range of (-10 ... 1,500) °C, which can be optionally extended to 3,000 °C. Thus, the ImagerIR® c7300 is suitable for a great variety of applications in industry, research, and monitoring. A wide range of high-quality infrared lenses with fixed focal length is available to accommodate the size of the test objects and the specific details to be analyzed. The ImagerIR® c7300 can be conveniently operated and configured via a **web interface**. Power is supplied via a wide-range power supply or via PoE.

A wide-range of interfaces for easy integration

When it comes to integration, the ImagerIR® compact proves practical: On-camera calibration data enable an easy plug-and-play installation. The camera is equipped with interfaces for reliable and fast data transmission (GigE) be integrated as well as for soft-

ware integration and control (GenICam / GigE Vision). In addition, the ImagerIR® c7300 enables highly precise and repeatable output of internal trigger signals as well as processing of external trigger signals. With all these features, the camera is a versatile tool for contactless measurement of temperature distributions and non-destructive testing using active thermography.



Lenses	Focal length (mm)	FOV (°)	IFOV (mrad)
Wide-angle lens	12	(43.6 × 35.5)	1.3
Standard lens	25	(21.7 × 17.5)	0.6
Telephoto lens	50	(11.0 × 8.8)	0.3
Telephoto lens	100	(5.5 × 4.4)	0.15
Telephoto lens	200	(2.7 × 2.2)	0.08

Macro and microscopic lenses	Minimum object distance (mm)	Object size (mm)	Pixel size (μm)
Close-up for telephoto lens 50 mm	300	(58 × 46)	90
Close-up for telephoto lens 100 mm	500	(48 × 38)	75
Microscopic lens M=1.0x	40 / 195 / 300	(9.6 × 7.7)	15
Microscopic lens M=3.0x	22	(3.2 × 2.6)	5

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