

FLIR SC7000-Series

State-of-the-art Technology Systems for R&D and Thermography Applications

- *Hypercal™ for Full Thermographic Measurement*
- *Broad Range of detectors to address any application*
- *Customizable optical interface*
- *Smart trigger and advanced capabilities*
- *Motorized filter wheel*
- *Plug & Play interface with GigE / CAMLINK*
- *Synchronous acquisition of external analogue signals*
- *Thermography analysis with Altair Software*
- *NDT and Thermomechanics with Thesa system*



FLIR SC7000-Series Features

A unique combination of technologies for Infrared R&D applications

The SC7000 Series is specifically designed for academic and industrial R&D applications as well as integrators who need to have a very flexible camera, with the highest sensitivity, accuracy, spatial resolution and speed at an affordable cost. The SC7000 Series are integrated systems, which complement SC5000 Series dedicated for industrial quantitative thermography and stress analysis.

Accurate Temperature Measurement with FLIR Hypercal™

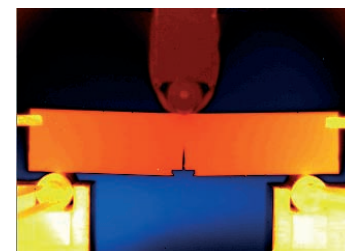
Its compact size allows implementation of the SC7000 Series into small spaces, and its removable lens interface gives complete flexibility in the optical path. The SC7000 Series is available with a wide range of detectors to address any application in single and multispectral analysis. Each of them has a programmable frame rate and integration time.

Temperature Range Extension

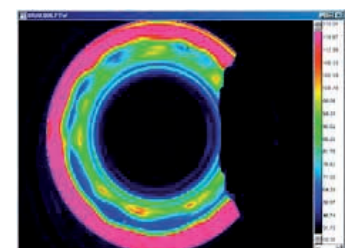
External triggering allows synchronization of the image capture to the most fleeting events with 3 external analogue signals. The SC7000 Series can be easily connected to a laptop computer through its truly plug and play and state of the art Camlink or GigE interfaces.



Signature and Range phenomenology applications gets benefit from the extraordinary versatility of the SC7000.



SC7000 systems offer a solution for every R&D measurement situation.



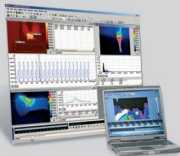
Brake disk analysis being conducted with a SC7000 reveals never seen before details thanks to fast and ultra sensitive detectors and electronics.

Camera Functions



- 1 High performance FPA with high durability cooler
- 2 GigE Interface
- 3 CAMLINK interface to transfer digital video at the fastest frame rate
- 4 Removable lens interface with embedded filter wheel
- 5 Smart trigger Input with Ultra Low Jitter
- 6 Analogue Signal Inputs
- 7 High quality S-Video
- 8 Rugged cast aluminium housing

Software



- **Altair radiometric software**
Ease of use, flexible layout, real time storage, camera control, radiometric features
- **Thesa Lock-in Thermography software**
Provides full field stress imaging contactless and in second.
- **Software development Kit (C++ / Labview)**

Accessories

- Spectral filters
- Battery pack for up to 4 hours autonomy
- USB advanced acquisition trigger module
- Attached Video Screen
- Industrial grade connectors & cables



Training

FLIR cooperates with Infrared Training Centre, an independent, ISO certified, worldwide training facility. ITC offers infrared training, certifications accepted by many standardization organizations, and specialized instruction in various application areas. For more info visit www.infraredtraining.com

FLIR SC7000-Series Specifications

Features*

Sensor type	InSb or MCT or QWIP
Waveband	3 - 5 μm or 8 - 12 μm (optional 1.5 - 5 μm)
Pixel resolution	320 x 256 or 640 x 512 available / 14 bits
Pitch	30 μm / 25 μm / 20 μm / 15 μm
NETD	< 20 mK
Cooler	Integrated stirling cooler
Max Full Frame rate	Up to 380 Hz
Integration time	1 μs to 20 ms variable by 1 μs step
Optical interface	M80 Thread Removable for custom optical design
Field of view	From 44° x 36° (12 mm) to 2.75° x 2.2° (200 mm) - Up to X3 microscope lens
Filter wheel	Wheel 4 slots motorized removable
Digital output	CAMLINK / GigE
Trigger input / output	Smart trigger capabilities
Temperature calibration range	Available from -20 °C to up to 3000 °C
Temperature measurement accuracy	± 1 °C or ± 1 %
Extended dynamic range	Multi IT™ / Temperature Range Extension (TRE)

*Best specifications

Integrated Features

3 external analogues signals, Lockin processing, Hypercal™, CNUC™

Physical Specifications

Size (w/o lens) (LxWxH)	253x130x168 mm
Weight (w/o lens)	4.950 Kgs
Operational temperature	-20 °C / +55 °C
Shock	Operational 25G, IEC 68-2-29
Vibration	Operational 2G, IEC 68-2-26
Input voltage	12 VDC / Battery
Power consumption (cooldown/stab)	< 30 W

Optional Lenses

12 mm F2	44° x 36°
25 mm F2	22° x 17°
50 mm F2	11° x 8.8°
100 mm F2	5.5° x 4.4°
200 mm F2	2.75° x 2.2°
Microscope lens X1	9.6 x 7.2 mm
Microscope lens X3	3.2 x 2.4 mm

FLIR SC7000-Series comes in a wide range of configurations.

Please contact your local FLIR office to define the best configuration for your application.

Authorised FLIR dealer:



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