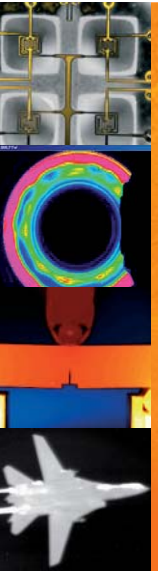




The Global Leader in Infrared Cameras

## TITANIUM SERIES

Complete Range of State-of-the-art technology systems for R&D and Thermography



- > Features NUC Free operation with CNUC™ and Hypercal™
- > Broad Range of detectors to address any application
- > Customisable optical interface
- > Smart Trigger with advanced capabilities
- > Motorised filter wheel
- > Plug & play interface with CAMLINK / GigE / USB2
- > Synchronous acquisition of external analogue signals
- > Thermography analysis with Altair Software
- > NDT and Thermomechanics with Altair LI system

# Complete Range of State-of-the-art technology systems for R&D and Thermography



- 1 High performance FPA with high durability cooler
- 2 USB2.0 / GigE
- 3 CAMLINK interface to transfer digital video at faster 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

## Accessories

- Altair radiometric software
- Software development Kit (C++ / Labview)
- Factory temperature calibration
- Spectral filters
- Battery pack for up to 4 hours autonomy
- USB advanced acquisition trigger module
- Attached Video Screen
- Embedded tablet PC
- Industrial grade connectors & cables

The Titanium 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 Titanium series are integrated system, which complement Silver series dedicated for industrial quantitative thermography and stress analysis.

Its compact size allows implementation of the Titanium into small spaces, and its removable lens interface gives complete flexibility in the optical path.

The Titanium 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.

External triggering allows synchronisation of the image capture to the most fleeting events with 3 external analogue signals. The Titanium can be easily connected to a laptop computer through its truly plug and play and state of the art Camlink, USB2 or GigE interfaces.

## Technical specifications

### Feature List for Titanium Series\*

Sensor type	InSb or MCT or QWIP
Waveband	3 - 5 $\mu$ m or 8 - 12 $\mu$ m (optional 1.5 - 5 $\mu$ m)
Pixel resolution	320 x 256 or 640 x 512 available / 14 bits
Pitch	30 $\mu$ m / 25 $\mu$ m / 20 $\mu$ m / 15 $\mu$ m
NETD	< 18 mK
Cooler	Integrated stirling cooler
Max Full Frame rate	Up to 380 Hz (up to 30 KHz with reduced image size)
Integration time	1 $\mu$ s Variable by 1 $\mu$ s step
Optical interface	M80 Thread, removable for custom design
Field of view	From 44°x36° (12 mm) to 2.75°x2.2° (200 mm) X3 microscope lens
Filter wheel	Wheel 4 slots motorized
Digital output	USB2 / CAMLINK / GigE
Trigger input	Smart trigger capabilities-Pre & post trigger features Ultra low jitter LVTTTL signal Optical fibres in option
Temperature calibration range	Available from -20 °C to up to 3000 °C
Temperature measurement accuracy	$\pm$ 1 °C or $\pm$ 1 %
Extended dynamic range	Multi IT™
*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
Base mounting	Standard UNC 1/4"
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	< 30 W

### Optional lenses - Bayonet mount

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 G1 F/2	9.6 x 7.7 mm
Microscope lens G3 F/2	3.2 x 2.6 mm
Lens Extenders	



The Global Leader in Infrared Cameras

### FLIR Systems AB - World Wide Thermography Center

Rinkebyvägen 19 - PO Box 3  
SE-182 11 Danderyd - Sweden  
Tel.: +46 (0)8 753 25 00 - Fax: +46 (0)8 755 07 52  
e-mail: sales@flir.se

FLIR Systems Sarl • France • Tel.: +33 (0)1 41 33 97 97 • e-mail: info@flir.fr

FLIR Systems AB • Belgium • Tel.: +32 (0)3 287 87 10 • e-mail: info@flir.be

FLIR Systems Co. Ltd. • Hong Kong • Tel.: +852 27 92 89 55 • e-mail: flir@flir.com.hk

FLIR Systems GmbH • Germany • Tel.: +49 (0)69 95 00 900 • e-mail: info@flir.de

FLIR Systems Ltd. • United Kingdom • Tel.: +44 (0)1732 220 011 • e-mail: sales@flir.uk.com

FLIR Systems S.r.l. • Italy • Tel.: +39 02 99 45 10 01 • e-mail: info@flir.it

www.cedip-infrared.com