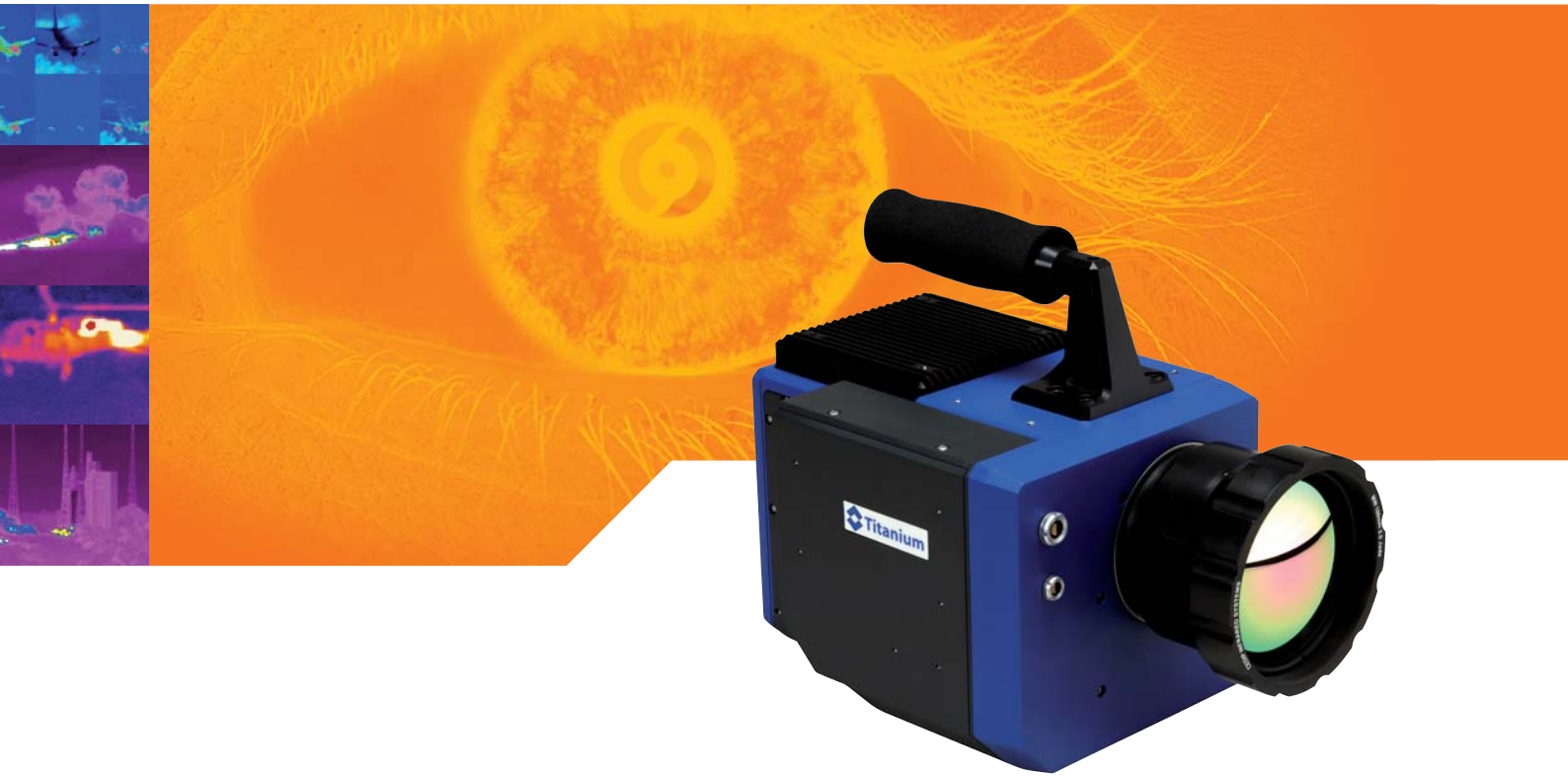
FLIR

The Global Leader in Infrared Cameras

TITANIUM ORION

Multispectral Imaging system for R&D and signature analysis



- Fast multispectral radiometric imagery
- MW & LW Systems
- 4 sub-band analysis
- Customisable filters
- Variable Exposure time from filter to filter
- Extremely extended dynamic range
- Wide range of lenses
- Gas detection, IR Signature, Flame analysis

Titanium ORION

The Titanium Orion system is an infrared multispectral imager capable of producing IR sub-band images at video rate within the SW-MWIR or LWIR region. This high performance system uses the latest state-of-the-art focal plane array (FPA) detector technology along with real-time, large dynamic range electronic modules.

Infrared radiation from the scene under investigation is collected through a front lens, designed to offer minimal aberration across the full IR wavelength range.
A filter wheel is inserted between the lens and the focal plane. The rotation of this filter wheel is driven synchronously with the FPA clocking, such that a single image snap shot is obtained for each particular filter position.

The FPA detector is capable of capturing up to 400 frames per second, each high quality image being captured in snap-shot mode. The integration time is variable by software and can be different for each filter. An image is captured for each given position of the filter wheel, providing true multispectral imaging.
The Titanium Orion can also be used as a normal IR camera at full speed by removing or stopping the filter wheel.

Further to image acquisition, the image data is processed by the ALTAIR software operating under Windows XP/Vista.

Technical specifications

Features List for Orion Series	Titanium ORION MW	Titanium ORION VLWIR
Pixel Resolution	320 x 256	320 x 256
Windowing	160 x 128 / 64 x 4 / user defined	160 x 128 / 80 x 64 / user defined
Max Full frame rate	380 Hz	235 Hz
Max Frame rate in ORION Mode	400 Hz	400 Hz
Integration time range	3-20000 µs	1-20000 µs
Digital output	14 bits CAMLINK / GigE	14 bits CAMLINK / GigE
NETD	<25 mK @ 30 °C (20 mK typical)	<30 mK @ 30 °C (25 mK typical)
Filter wheel	Wheel 2x4 slots	Wheel 2x4 slots
Optical interface	M80	M80
Analogue signals	1 x (-5 to 5 V) / 2 x (0 to 10 V)	1 x (-5 to 5 V) / 2 x (0 to 10 V)

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

Physical Specifications	
Size w/o lens (LxWxH)	268 x 180 x 168 mm
Weight w/o lens	7 kg
Base Mounting	1/4 20 UNC
Operational temperature	-20 °C to +60 °C
Power supply	12 or 24 V

Optional lenses	FOV
F12 mm F/2	44° x 36°
F25 mm F/2	21° x 17°
F50 mm F/2	11° x 8.8°
F100 mm F/2	5.5° x 4.4°
F200 mm F/2	2.75° x 2.2°
Microscope lens G1 F/2	FOV 9.6 mm x 7.7 mm
Microscope lens G3 F/2	FOV 3.2 mm x 2.6 mm
Lens extender	

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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