



The IP-67 certified enclosure.

## HIGH-SPEED INFRARED CAMERAS.

The FAST-IR series includes the fastest infrared cameras available on the market. To analyze dynamic events, the FAST-IR infrared cameras allow high-speed thermal imaging with an impressive temporal resolution at a rapid frame rate. These high-performance infrared cameras are extremely sensitive, enabling the detection of challenging targets.

## KEY BENEFITS

### ULTRAHIGH FRAME RATE

Maximum data throughput is larger than 1 Gigabit/s. High performance electronics produce thermal images at rates of up to 1 012 fps. Sub-windows can even be acquired at rates higher than 17 000 fps.

### HIGH-SPEED INTERNAL MEMORY

1 GB memory for autonomous operation.

### HIGH SENSITIVITY

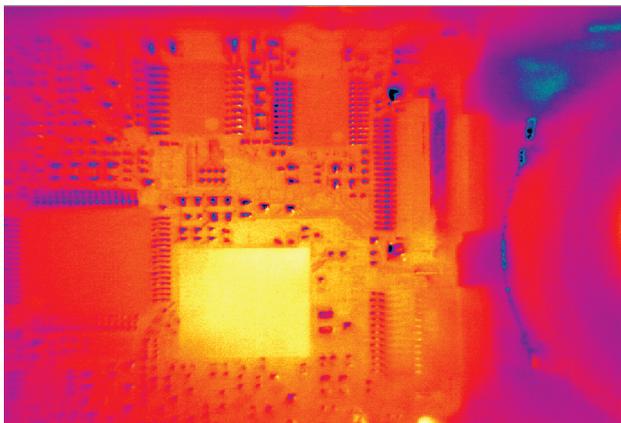
Temperature differences as small as 30 mK are detectable.

### ADVANCED CALIBRATION

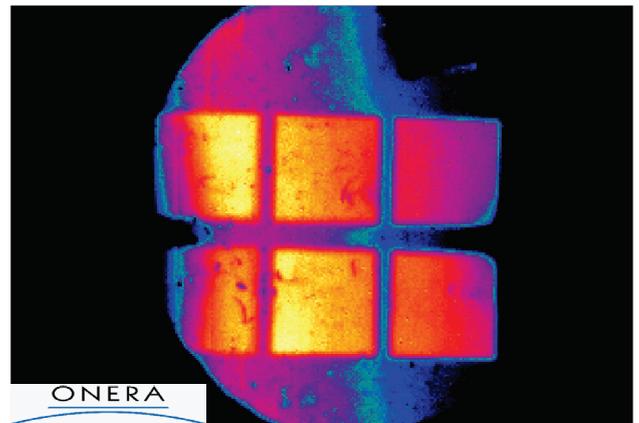
Unique proprietary real-time processing of infrared images including NUC, radiometric temperature, automated exposure control (AEC) and enhanced high-dynamic-range imaging (EHDMI). With these unique features, scientists benefit from ease of use and operation flexibility while getting accurate measurements over the entire camera's operation range.

## EXAMPLES OF TYPICAL USES

HF micro-electronic heat management



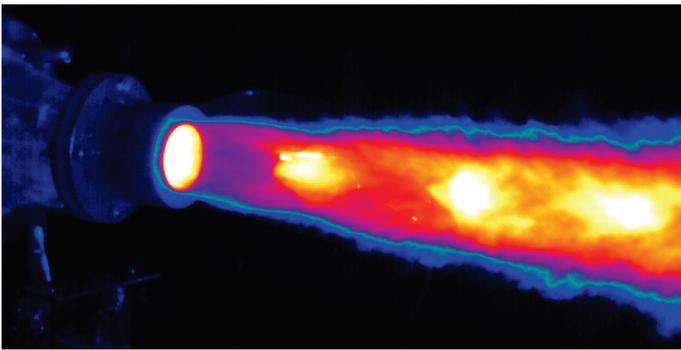
Cell Imaging



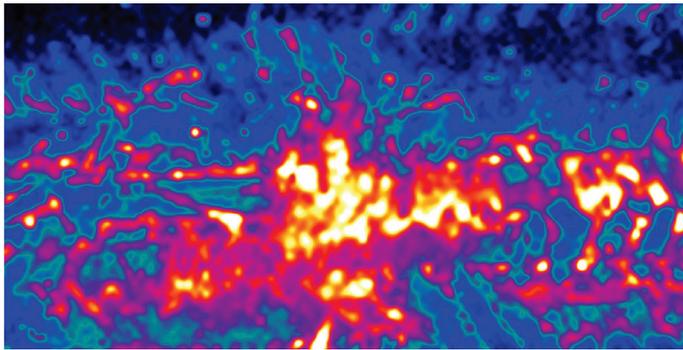
ONERA  
THE FRENCH AEROSPACE I.A.D.

Shaping the spatial and spectral emissivity at the diffraction limit  
Appl. Phys. Lett. 107, 251103 (2015) <https://doi.org/10.1063/1.4937453>

FAST V1k	
SPECIFICATIONS	FAST V1k
DETECTOR TYPE	Cooled SLS
SPECTRAL RANGE	7.5 μm to 11.5 μm
SPATIAL RESOLUTION	640 × 512 pixels
DETECTOR PITCH	25 μm
APERTURE SIZE	F/2
FRAME RATE	1 012 Hz
MAXIMUM FRAME RATE	2 400 Hz @ 320 × 256 40 000 Hz @ 64 × 8
ENVIRONMENTAL RESISTANCE	IP67
OPERATIONAL SHOCK	IEC-60068-2-27
OPERATIONAL VIBRATION	IEC-60068-2-64
OPERATIONAL TEMPERATURE	-15 °C to +50 °C
STORAGE TEMPERATURE	-35 °C to +60 °C
TYPICAL NETD	30 mK
EXPOSURE TIME	0.27 μs to full frame rate
LENS MOUNT	Threaded interface



Pulsed detonation rocket engine



Impact of a projectile in the back of a composite material

OTHER SPECS & FEATURES	
Rotary-stirling closed cycle sensor cooling	Gig-E
Blackbody-free permanent calibration (up to 150 °C)	Camera Link
Calibration up to 2 500 °C (optional)	Trigger In, Trigger Out
16 bits dynamic range	SDI, GPS, IRIG-B, RS232 and thermistor ports
High-speed internal memory buffer: up to 32 GB	Lock-In (optional)
Automatic exposure control (AEC)	Weight w/o lens: < 7 kg
Enhanced high-dynamic-range imaging (EHDR1)	Size w/o lens: 7.8" × 7.7" × 12.9" 199 mm × 198 mm × 330 mm

FOR MORE INFORMATION | [TELOPS.COM](http://TELOPS.COM)

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