



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

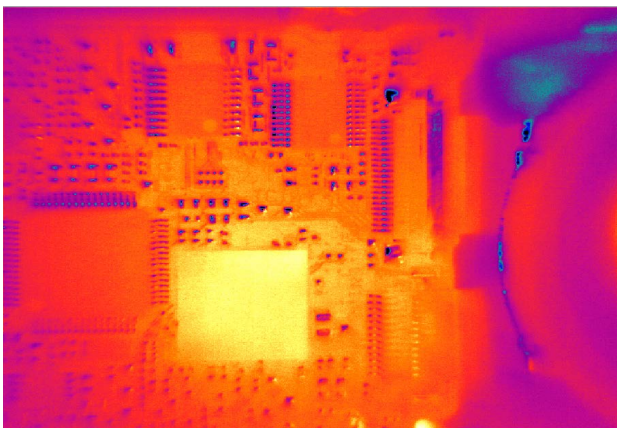
Temperature differences as small as 30 mK are detectable.

ADVANCED CALIBRATION

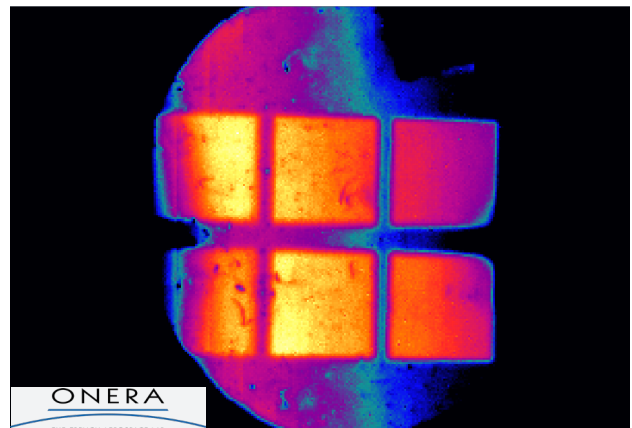
Unique proprietary real-time processing of infrared images including NUC, radiometric temperature, automated exposure control (AEC) and enhanced high-dynamic-range imaging (EHDRI). With these unique features, scientists benefit from ease of use and operation flexibility while getting accurate measurements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

EXAMPLES OF TYPICAL USES

HF micro-electronic heat management

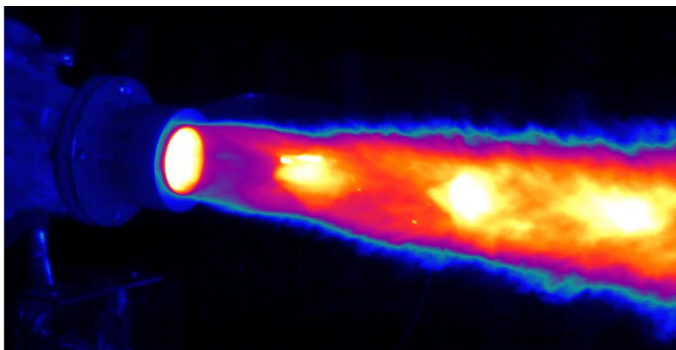


Cell Imaging

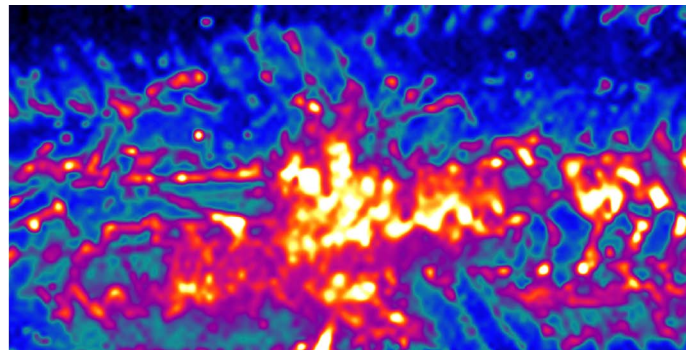


Shaping the spatial and spectral emissivity at the diffraction limit
Appl. Phys. Lett. 107, 251103 (2015) <https://doi.org/10.1063/1.4937453>

FAST V1k	
SPECIFICATIONS	FAST V1k
DETECTOR TYPE	Cooled SLS
SPECTRAL RANGE	7.5 μm to 11.5 μm
SPATIAL RESOLUTION	640 \times 512 pixels
DETECTOR PITCH	25 μm
APERTURE SIZE	F/2
FRAME RATE	1 012 Hz
MAXIMUM FRAME RATE	2 400 Hz @ 320 \times 256 40 000 Hz @ 64 \times 8
ENVIRONMENTAL RESISTANCE	IP67
OPERATIONAL SHOCK	IEC-60068-2-27
OPERATIONAL VIBRATION	IEC-60068-2-64
OPERATIONAL TEMPERATURE	-15 $^{\circ}\text{C}$ to +50 $^{\circ}\text{C}$
STORAGE TEMPERATURE	-35 $^{\circ}\text{C}$ to +60 $^{\circ}\text{C}$
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 $^{\circ}\text{C}$)	Camera Link
Calibration up to 2 500 $^{\circ}\text{C}$ (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: < 6 kg
Enhanced high-dynamic-range imaging (EHDR1)	Size w/o lens: 12.6" \times 7.8" \times 6.9" 321 mm \times 199 mm \times 176 mm

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