

FAST HIGH-PERFORMANCE INFRARED CAMERA

FAST-IR 2K

TELOPS

A HIGH SPEED INFRARED CAMERA

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 Gigapixel/s. High performance electronics produce thermal images at rates of up to 2000 fps. Sub-windows can even be acquired at rates of 90 000 fps.

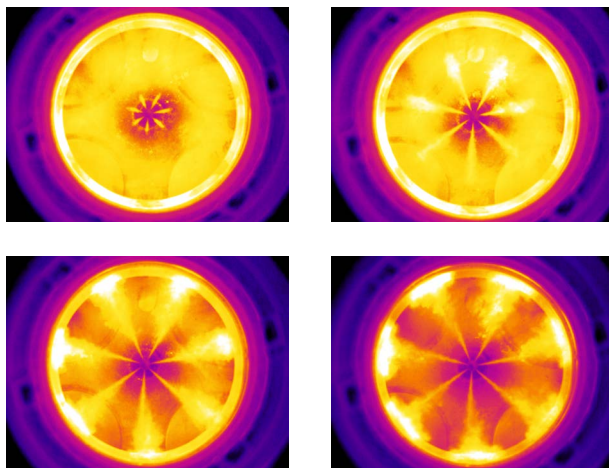
Advanced Calibration: Unique proprietary real-time processing of infrared images including NUC, radiometric temperature, automated exposure control (AEC) and enhanced high-dynamic-range imaging (EHDR). With these unique features, scientists benefit from ease of use and operation flexibility while getting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

High-Speed Internal Memory: 16 GB memory for more than 50 seconds of recording and autonomous operation.

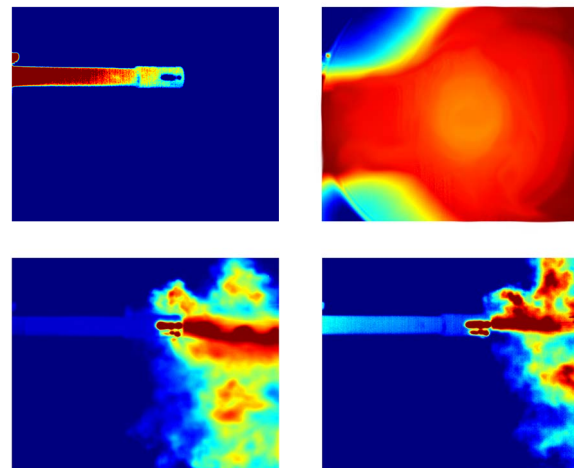
Accurate Measurement: Radiometric temperature accuracy of $\pm 1^\circ\text{C}$ or $\pm 1\%$ over the entire range.

High Sensitivity: Temperature differences as small as 25 mK are detectable.

Observation of fuel injection



M16 muzzle flash analysis



DETECTOR SPECIFICATIONS	FAST-IR 2K
Detector type	InSb
Spectral range	3 - 5.4 μm (others available upon request)
Spatial resolution	320 x 256 pixels
Detector pitch	30 μm
Aperture size	F/2.5
Well depth	3.4 Me- (150 ke- available, requires additional calibration)
Sensor cooling	Rotary-stirling closed cycle

TYPICAL PERFORMANCES	
Frame rate	2000 Hz @ 320 x 240 90 000 Hz @ 64 x 4
Scene temperature range	0 °C to 150 °C Up to 600 °C (optional) Up to 1500 °C (optional) Up to 2500 °C (optional)
Measurement accuracy	1K or 1% (°C)
Typical NETD	25 mK

ELECTRONIC SPECIFICATIONS	
Exposure time	1 μs to full frame rate
Windowing to increase frame rate	Yes
Dynamic range	16 bits

CAMERA CONSTRUCTION	
Lens mount	Bayonet interface
Size w/o lens	12.6" x 7.8" x 5.3" 320.04 mm x 198.12 mm x 134.62mm
Weight w/o lens	< 6 kg

Actual product may differ and specifications are subject to change without notice.

ENVIRONMENTAL SPECIFICATIONS

Environmental rating:
IP67

Operating temperature range:
-20°C to +50°C

Storage temperature ranges:
-35°C to +60°C

Operational Vibration
IEC-60068-2-64

Operational Shock
IEC-60068-2-27



BACK PANEL INTERFACE

1. CameraLink base/full
2. Power
3. Thermistor
4. RS-232: Camera remote control
5. IRIG-B
6. HD-SDI
7. Trig-in: Trigger the camera on TTL signal
8. Trig-out: Output TTL signal
9. Ethernet: GigE Vision compatible
10. GPS Input: GPS time and location from external GPS receiver
11. Power 24 VDC, 50W steady-state. Includes 120-230 VAC power supply

