



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 3 100 fps. Sub-windows can even be acquired at rates higher than 100 000 fps.

HIGH-SPEED INTERNAL MEMORY

16 GB (expandable) memory for autonomous operation.

HIGH SENSITIVITY

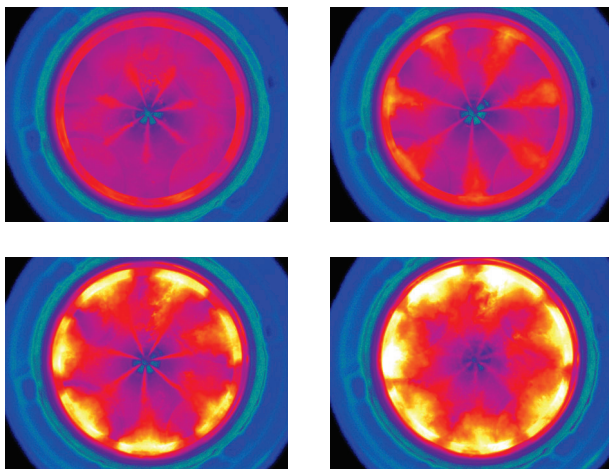
Temperature differences as small as 25 mK are detectable.

ADVANCED CALIBRATION

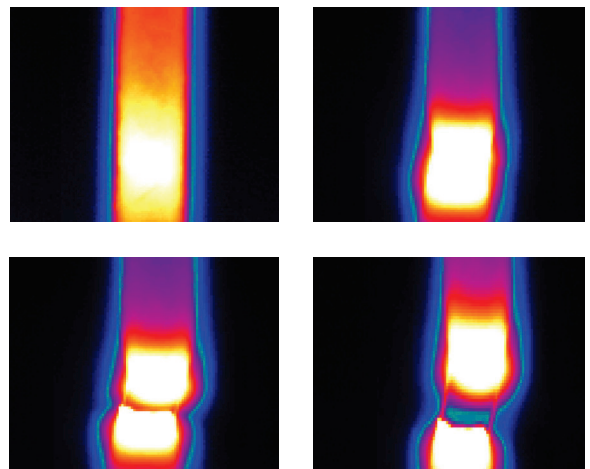
Unique proprietary real-time processing of infrared images including NUC, radiometric temperature, automated exposure control (AEC) and enhanced high-dynamic-range imaging (EHDMI). With these unique features, scientists benefit from ease of use and operation flexibility while getting accurate measurements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

EXAMPLES OF TYPICAL USES

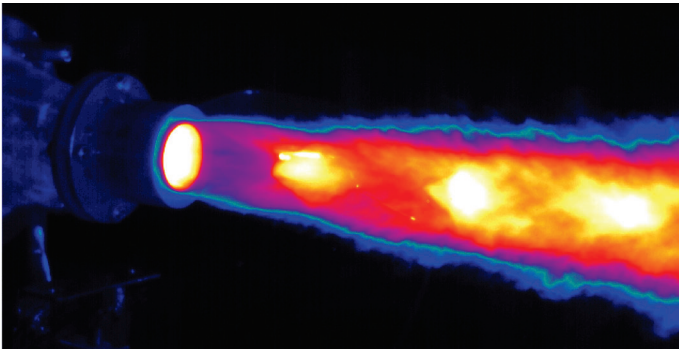
Observation of fuel injection



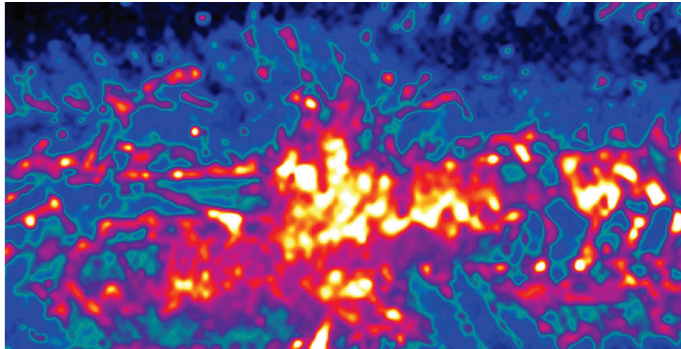
Tensile testing of a steel rod



| FAST M3k | |
|--------------------------|-------------------------|
| SPECIFICATIONS | FAST M3k |
| DETECTOR TYPE | Cooled InSb |
| SPECTRAL RANGE | 1.5 μm to 5.4 μm |
| SPATIAL RESOLUTION | 320 × 256 pixels |
| DETECTOR PITCH | 30 μm |
| APERTURE SIZE | F/2.5 |
| FRAME RATE | 3 100 Hz |
| MAXIMUM FRAME RATE | 100 000 Hz @ 64 × 4 |
| 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 | 25 mK |
| EXPOSURE TIME | 1 μs to full frame rate |
| LENS MOUNT | Bayonet 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: < 6 kg |
| Enhanced high-dynamic-range imaging (EHDMI) | Size w/o lens: 12.6" × 7.8" × 6.9" 321 mm × 199 mm × 176 mm |

FOR MORE INFORMATION | TELOPS.COM

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