

Multi-spectral engine combustion analysis/IR target signature acquisition

Telops MS-IR FAST

Multi-spectral high-speed infrared camera



The **TELOPS MS-IR FAST** is a fast frame-rate infrared camera capable of splitting the scene signal into eight different spectral bands instead of one broadband image, allowing for spectral signature analysis. This IR camera features an innovative *fast rotating filter wheel*, specifically designed to maximize the frame rate, helping you get the most from your exposures!

Key features & benefits

Multi-spectral capabilities: 8-channel multi-spectral analysis using a high-speed filter wheel. Rotating speed is user adjustable up to 100 Hz, supporting frame rates up to 800 fps. Image acquisition in fast rotating mode is synchronized to one image per filter.

Ultra high-data rate: maximum data throughput larger than 1 gigapixel. High-performance electronics produce full-frame thermal images at rates up to 1,500 fps. Subwindows can be acquired faster than 35,000 fps.

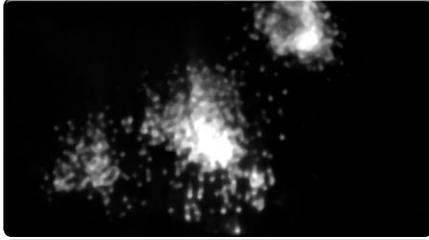
High dynamic range: unique Telops proprietary non-linearity correction and exposure time independent calibration algorithms ensure observation of scene targets with the highest possible contrast and accuracy

Optional: fast automated attenuation filters are ideal to measure scenes with extreme temperature variations

Advanced calibration: unique proprietary real-time processing of infrared images including NUC, radiometric temperature, in-band radiance, automated exposure control (AEC) and enhanced high dynamic range imaging (EHDR1)

Accurate measurement: radiometric temperature accuracy of ± 1 °C or $\pm 1\%$ over the entire range

High sensitivity: detectable temperature differences as small as 20 mK



Multi-spectral fireworks analysis

TELOPS MS-IR FAST Tech Specs

Detector	
Detector type	InSb
Spectral range	3 μm to 5 μm
Spectral resolution	320 x 256 pixels
Detector pitch	30 μm
f/number	f/2.45
Sensor cooling	Split-stirling closed cycle

Typical performances	
Maximum full-frame rate	1,500 Hz
Scene temperature range	Up to 1,500 °C
Measurement accuracy	1 K or 1% (°C) from -15 °C to 150 °C
Typical NETD	25 mK

Electronics	
Exposure time	1 μs to full-frame time
Windowing	Yes
Dynamic range	16 bits

Camera	
Multi-spectral (option)	8x/1" optics fixed or raw fast rotating
Lens mount	Janos bayonet interface
Dimensions (without lens)	14" x 9" x 9"
Weight (without lens)	< 13 kg

Connections

1. Trig In (trigger camera on TTL signal)
2. Trig Out (output TTL signal)
3. Camera Links (base & full)
4. IRIG-B
5. NTSC/PAL
6. LCC (thermistor)
7. GPS (time & location from external GPS receiver)
8. Auxiliary connector (44 pins)
9. Power 24 VDC 60W steady-state



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For more information

Call 1-800-248-4686 or email, infrared@hadlandimaging.com about ultra high-speed imaging solutions.