

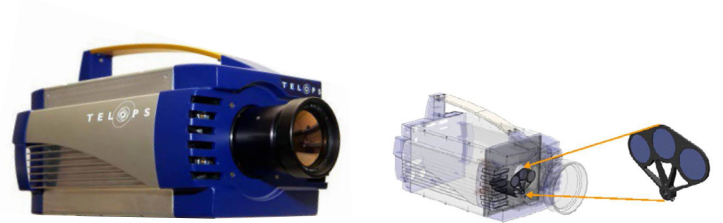
HIGH DEFINITION INFRARED CAMERA

HDR-IR

T E L O P S

A HIGH SPEED INFRARED CAMERA

The HDR-IR infrared camera series includes high performance cameras which cover extended scene temperature ranges. These cameras maximize camera sensitivity automatically for any static or dynamic scenes. They automatically operate with the best exposure time depending on the scene, and allow to resolve targets up to 2500°C.



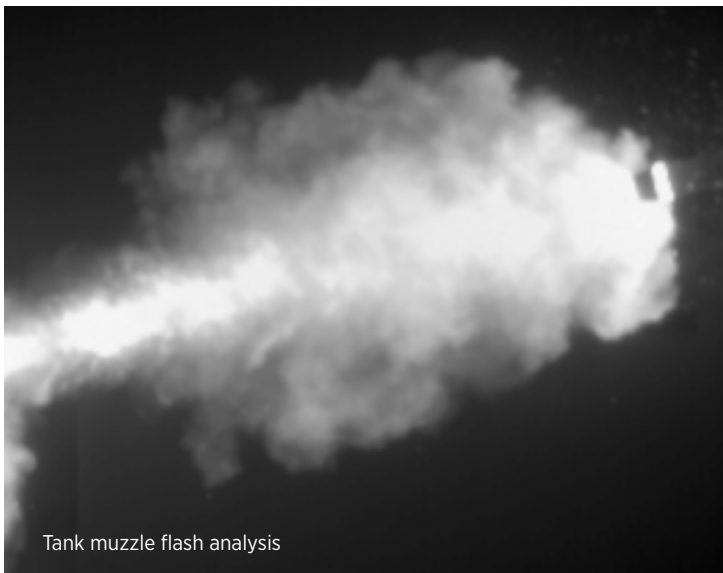
KEY BENEFITS

Ultra 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. Fast automated attenuation filters are also included to measure scenes with extreme temperature variations.

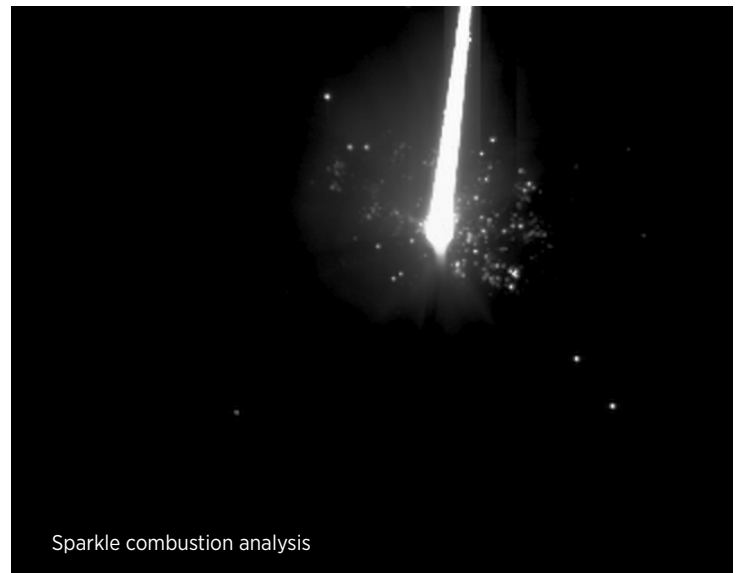
High Data Rate: High performance electronics produce full-frame thermal images at rates up to 300 fps.

Advanced Calibration: Unique proprietary real-time processing of infrared images including NUC, radiometric temperature, automated exposure control (AEC) and enhanced high dynamic range imaging (EHDMI).

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



Tank muzzle flash analysis



Sparkle combustion analysis

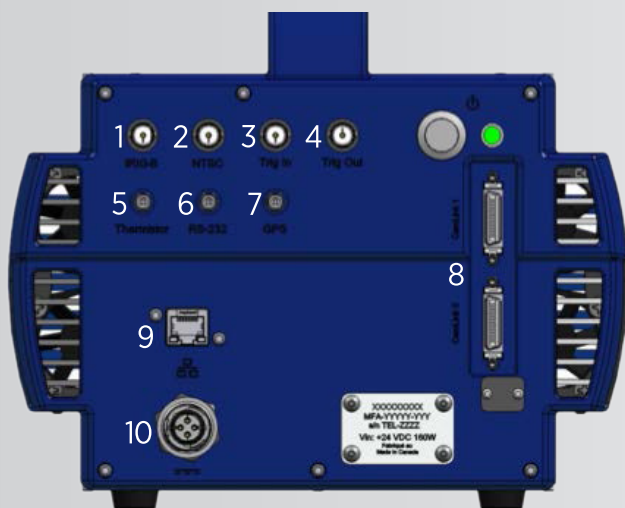
DETECTOR SPECIFICATIONS	HDR-IR MW	HDR-IR VLW
Detector type	MCT	MCT
Spectral range	3 µm to 4.9 µm	7.7 µm to 11.8 µm
Spectral resolution	640 x 512 pixels	320 x 256 pixels
Detector pitch	16 µm	30 µm
Aperture size	F/4	F/2
Well depth	Selectable well depth (260 fF, 200 fF, 120 fF, 70 fF)	36 Me-
Sensor cooling	Rotary-stirling closed cycle	Rotary-stirling closed cycle

TYPICAL PERFORMANCES		
Maximum full frame rate	115 Hz 107000 Hz @ 64 x 4	300 Hz 122000 Hz @64 x 2
Scene temperature range	Up to 1500°C Up to 2500°C	Up to 1500°C Up to 2500°C
Measurement accuracy	1 K or 1% (°C) from -15°C to 150°C	1 K or 1% (°C) from -15°C to 150°C
Typical NETD	17 mK	25 mK

ELECTRONIC SPECIFICATIONS		
Exposure time	0.2 µs to full frame rate	0.5 µs to full frame rate
Windowing to increase frame rate	Yes	Yes
Dynamic range	16 bits	16 bits

CAMERA CONSTRUCTION		
Lens mount	Bayonet interface	Threaded interface
Size w/o lens	14" x 9" x 9" 355.6 mm x 228.6 mm x 228.6 mm	14" x 9" x 9" 355.6 mm x 228.6 mm x 228.6 mm
Weight w/o lens	< 13 kg	< 13 kg

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



BACK PANEL INTERFACE

1. IRIG-B
2. HD-SDI
3. Trig-in: Trigger the camera on TTL signal
4. Trig-out: Output TTL signal
5. Thermistor: LCC
6. RS-232
7. GPS Input: GPS time and location from external GPS receiver
8. CameraLink base/full
9. Ethernet: GigE Vision compatible
10. Power: 24 VDC 60 W steady state. Includes 120-230 VAC power supply.

