

HDR-IR Family



HIGH-DYNAMIC-RANGE INFRARED CAMERAS

KEY FEATURES



**ENHANCED IN-SCENE
DYNAMIC RANGE**



HIGH FRAME RATE



**IMAGE HOT AND COLD TARGET
SIMULTANEOUSLY**



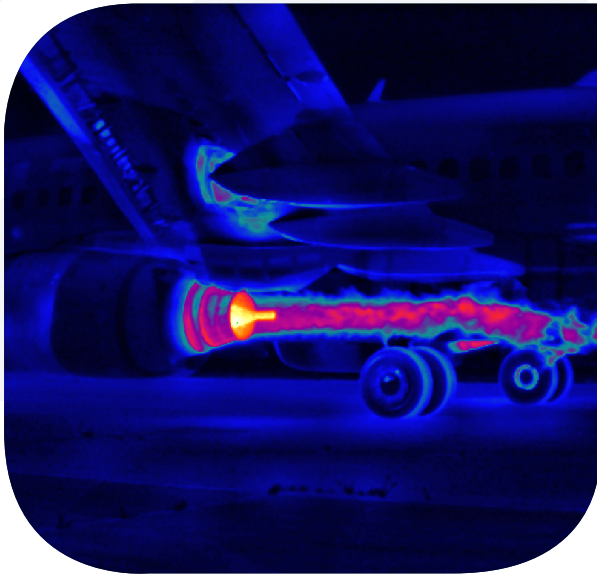
AUTOMATIC EXPOSURE CONTROL

The HDR-IR family of camera are optimized for high dynamic range performance when presented with scenes containing strong thermal contrast. The HDR M350 and HDR M3k employ a unique automated fast-switching neutral density filter mechanism designed to continually optimize in-scene dynamic range performance over time and changing scene contrast conditions.

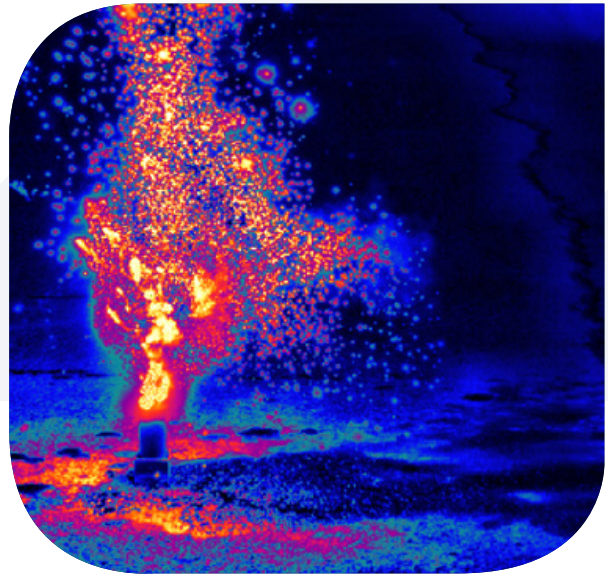
The HDR M700 presents a revolutionary upgrade to in-scene dynamic range capabilities compared to traditional thermal cameras. The advanced design of the HDR M700 allows for a measurement range of approximately 900 degrees in a single exposure snapshot, allowing for efficient imaging of hot and cold target simultaneously.



EXAMPLES OF TYPICAL USES



High Dynamic Range enables detailed imaging of a broad range of target temperatures in the same scene



900 degree in-scene dynamic range in a single image allows for efficient measurement of hot targets and cold backgrounds in the same scene

MIDWAVE SERIES

SPECIFICATIONS	HDR M700	HDR M350	HDR M3k
HDR Mechanism	On-Chip Saturation Management	Filter-Based	Filter-Based
Detector Type	Cooled SLS	Cooled InSb	Cooled InSb
Detector Format	640 × 512 pixels	640 × 512 pixels	320 × 256 pixels
Spectral Range	3.0 – 5.4 μm	3.0 – 5.4 μm	3.0 – 5.4 μm
Optical Aperture	F/4	F/3	F/3
Max. Frame Rate (Full Window)	650 Hz	355 Hz	1 900 Hz
Max. Frame Rate	650 Hz @ 640 x 512	4 980 Hz @ 64 x 4	90 000 Hz @ 64 x 4
Max. Frame Rate (Subwindow)	40 000 Hz	4 980 Hz @ 64 x 4	90 000 Hz @ 64 x 4
Environmental Resistance	IP67	IP67	IP67
Operational Temperature	-15 °C to +50 °C	-20 °C to +50 °C	-20 °C to +50 °C
Storage Temperature	-35 °C to +60 °C	-35 °C to +60 °C	-35 °C to +60 °C
Typical NETD	20 mK	20 mK	30 mK
Exposure Time	1 μs in full frame rate	0.5 μs in full frame rate	1 μs in full frame rate
Lens Mount	Threaded	Bayonet	Bayonet

ABOUT US

Telops is a leading supplier of high-performance scientific infrared cameras for the defence, academic, industrial, and environmental research industries. Telops also offers R&D services for optical systems technology development.

Since its beginning in 2000, Telops has distinguished itself with the quality of its technical personnel and its innovative approach to many technological challenges in the optics field.

Today, Telops is part of the Exosens Group, expanding even more our technologies, innovation and capabilities.



FEATURES & OPTIONS

OUR INFRARED CAMERAS' KEY FEATURES & SPECS

All our FAST infrared cameras offer advanced features to address the most demanding research applications. They include:

- Rotary-stirling closed cycle sensor cooling.
- Blackbody-free permanent calibration (up to 150 °C).
- Calibration up to 2500 °C (optional).
- High-speed internal memory buffer: up to 32 GB (optional).
- Gig-E.
- Camera Link.
- Trigger In, Trigger Out.
- SDI, GPS, IRIG-B, RS232 and thermistor ports.
- Lock-In (optional).
- Automatic exposure control (AEC).
- Enhanced high-dynamic-range imaging (EHDR).
- 16 bits dynamic range.
- Weight w/o lens: < 6 kg.
- *Weight w/o lens: < 7 kg. (V1k/V500).
- Size w/o lens: 12.6" × 7.8" × 6.9" (321 × 199 × 176 mm).
- *Size w/o lens: 12.9" × 7.8" × 7.7" (199 × 198 × 330 mm) (V1k/V500).
- Operational Vibration: IEC-60068-2-64.
- Operational Shock: IEC-60068-2-27.

OUR INFRARED CAMERAS' LENS OPTIONS

Telops offers a variety of lens options depending on your camera configuration using either a flanged, threaded, or bayonet mount interface.

Customized optics are available, as well as many accessories such as telescopes and microscopes.