



The IP-67 certified enclosure.

## HIGH DYNAMIC RANGE INFRARED CAMERA

The HDR M700 represents a revolution in high dynamic range infrared imaging. Traditional midwave infrared cameras can effectively measure a span of about 150 degrees with a single exposure time before experiencing image saturation. Telops HDR M700 utilizes an advanced on-chip saturation management solution to extend the single-exposure time dynamic range to a span of over 900 degrees enabling analysis of scenes and objects exhibiting strong thermal contrast.

## KEY BENEFITS

### HIGH DYNAMIC RANGE

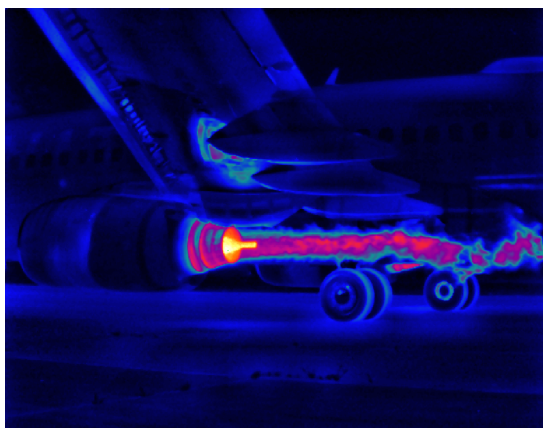
24-bit architecture and advanced on-chip saturation management solution enable measurement of extremely wide temperature ranges in a single snapshot image. Traditional MW thermal cameras can typically measure a range of about 100-150 degrees in a single image using a single exposure time. The advanced design of the HDR M700 allows for a measurement range of approximately 900 degrees in a single exposure time snapshot, allowing for efficient and quantitative imaging of hot and cold objects simultaneously.

### TELOPS RTTC

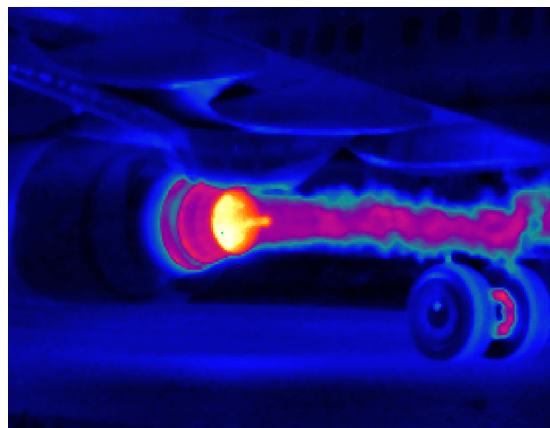
Unique proprietary real-time processing of infrared images including NUC, radiometric temperature, in-band radiance, and in-band irradiance. Blackbody-free calibration allows for full freedom over important image parameters including exposure time and window size without impacting radiometric accuracy. This advanced calibration protocol benefits users through increased ease of use and operational flexibility while maintaining radiometric performance and image quality throughout the entire camera operating range.

## EXAMPLES OF TYPICAL USES

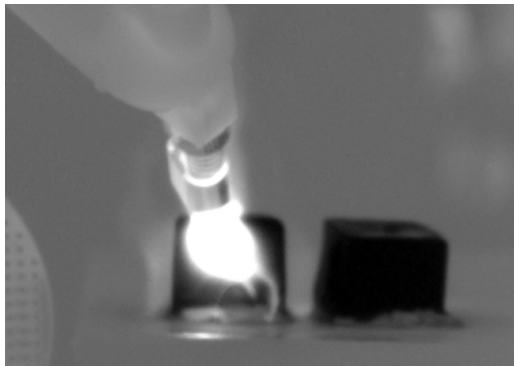
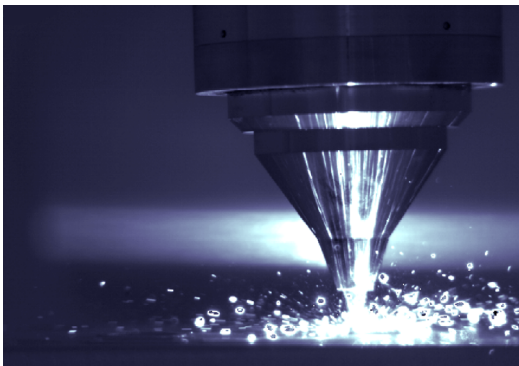
High dynamic range enables detailed imaging of a broad range of target temperatures in the same scene



Increased in-scene dynamic range allows for precise visualization of hot target behavior without sacrificing image quality for lower temperature objects



HDR M700	
SPECIFICATIONS	HDR M700
DETECTOR TYPE	SLS
SPECTRAL RANGE	3.0 $\mu\text{m}$ to 5.0 $\mu\text{m}$
APERTURE SIZE	F/4
FRAME RATE	650 Hz @ 640 $\times$ 512
MAXIMUM FRAME RATE	40 000 Hz
ENVIRONMENTAL RESISTANCE	IP67
OPERATIONAL TEMPERATURE	-15 $^{\circ}\text{C}$ to +50 $^{\circ}\text{C}$
STORAGE TEMPERATURE	-35 $^{\circ}\text{C}$ to +60 $^{\circ}\text{C}$
TYPICAL NETD	20 mK
EXPOSURE TIME	1 $\mu\text{s}$ to full frame rate
LENS MOUNT	Threaded



High dynamic range capability allows simultaneous imaging of hot and cold target in the same scene.  
 (Left) Visualization of a high temperature additive manufacturing process  
 (Right) Ice cube being melted by a propane blow torch

OTHER SPECS & FEATURES	
Rotary-stirling closed cycle sensor cooling	Camera Link
Blackbody-free permanent calibration (up to 1000 $^{\circ}\text{C}$ )	Trigger In, Trigger Out
Calibration up to 2 500 $^{\circ}\text{C}$ (optional)	SDI, GPS, IRIG-B, RS232 and thermistor ports
24 bits dynamic range	Lock-In (optional)
High-speed internal memory buffer: up to 32 GB	Weight w/o lens: < 7 kg
Gig-E	Size w/o lens: 12.6" $\times$ 7.8" $\times$ 6.9" 321 mm $\times$ 199 mm $\times$ 176 mm

FOR MORE INFORMATION

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