

# SCIENTIFIC THERMAL INFRARED CAMERA.

The M200hd is a cooled, high-performance scientific thermal infrared camera designed to provide excellent image quality and impressive thermal sensitivity. It features our unique real-time calibration and is an excellent choice for a variety of scientific and industrial applications.

### **KEY BENEFITS**

#### HIGH FRAME RATE

Maximum data throughput is larger than 1 Gigapixel/s. High performance electronics produce thermal images at rates up to 180 fps in full-frame mode. Sub-windows can be acquired at rates up to 2180 fps.

#### HIGH-SPEED INTERNAL MEMORY

1 GB memory for autonomous operation.

#### **HIGH SENSITIVITY**

Temperature differences as small as 30 mK are detectable.

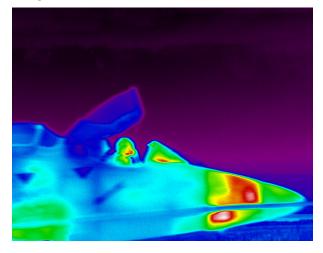
#### ADVANCED CALIBRATION

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

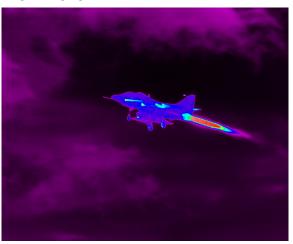
With these unique features, scientists benefit from ease of use and operation flexibility while getting accurate measurements over the entire camera's operation range.

## **EXAMPLES OF TYPICAL USES**

IR signature



Target ranging



FAST M200hd		
SPECIFICATIONS	FAST M200hd	
DETECTOR TYPE	Cooled InSb	
SPECTRAL RANGE	1.5 $\mu$ m to 5.4 $\mu$ m (3 to 5 $\mu$ m optional)	
SPATIAL RESOLUTION	1 280 × 1 024 pixels	
DETECTOR PITCH	10 μm	
APERTURE SIZE	F/3	
MAXIMUM FRAME RATE IN FULL WINDOW	180 Hz	
MAXIMUM FRAME RATE IN SUBWINDOW	2 180 Hz @ 64 × 8	
TYPICAL NETD	30 mK	
MIN. EXPOSURE TIME	0.5 μs to full frame rate	
LENS MOUNT	Bayonet interface	



Jet engine IR signature measurement



Helicopter IR signature characterization

OTHER SPECS & FEATURES	
Rotary-stirling closed cycle sensor cooling	Gig-E, Camera Link
Blackbody-free permanent calibration (up to 150 °C)	Trigger In, Trigger Out
Calibration up to 2 500 °C (optional)	SDI, GPS, IRIG-B, RS232 and thermistor ports
16 bits dynamic range	Lock-In (optional)
Automatic exposure control (AEC)	Weight: < 6 kg
Enhanced high-dynamic-range imaging (EHDRI)	Size w/o lens: 12.6" × 7.8" × 6.9" 321 mm × 199 mm × 176 mm