



The IP-67 certified enclosure

FAST SWIR RADIOMETRIC CAMERAS

The FAST S1K camera series is the fastest infrared camera in the short wave infrared band. It is designed to provide radiometric measurements of hot targets in the application context of IR signature and ranging.

It is the unique camera with kilohertz and radiometric imaging capability in the SWIR. It also features high-sensitivity measurements for low light, thanks to its ultra-low-noise detector.

KEY BENEFITS

HIGH FRAME RATE

High-performance electronics produce thermal images at rates of up to 1 000 fps. Subwindows can even be acquired at rates higher than 109 000 fps, depending on the selected subwindow size.

Camera Link interface ensures reliable, lossless data transfer.

HIGH-SPEED INTERNAL MEMORY

The camera features a 16 GB (expandable) memory for autonomous operation.

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.

OPTIC MOUNTS

The camera comes with a C-mount interface, allowing the use of a wide variety of commercial and custom lenses.

EXAMPLES OF TYPICAL USES

IR Signature



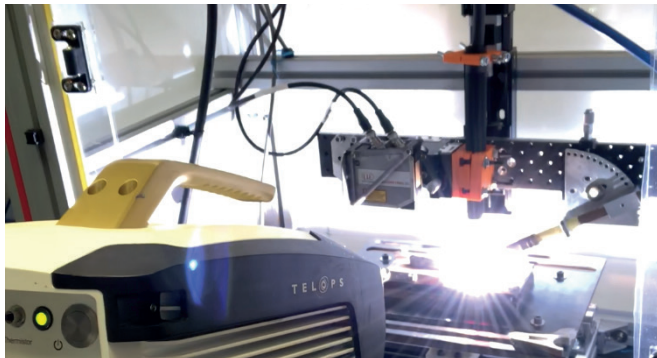
Target Ranging



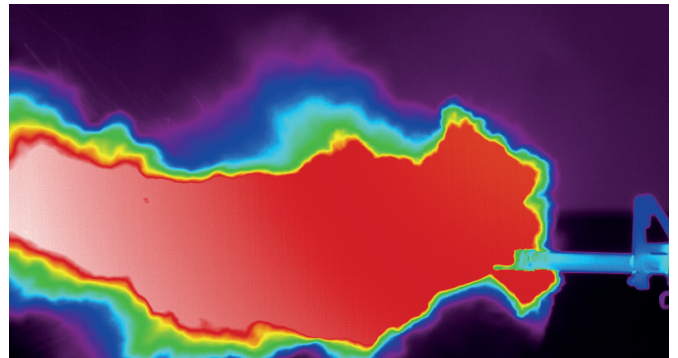
Courtesy of Office of Naval Research and US Army Night Vision and Electronic Sensors Directorate

FAST-SWIR	
SPECIFICATIONS	FAST S1k
DETECTOR TYPE	InGaAs
PIXEL SIZE	20 μm x 20 μm
SPECTRAL BAND	0.9 μm to 1.7 μm
TEMPERATURE CALIBRATION (OPTIONAL)	300 to 1000 °C
SPATIAL RESOLUTION	640 x 512 pixels
MAXIMUM FRAME RATE (FULL WINDOW)	1 000 Hz
MAXIMUM FRAME RATE (IN SUBWINDOW)	103 000 Hz @ 64 x 8
TEMPERATURE	-20 °C to +50 °C operational Storage: -40 °C to +50 °C
READOUT NOISE	< 250 e- (high gain) < 1100 e- (low gain)
INTERNAL HIGH-SPEED MEMORY	16 GB of high-speed memory, expandable to 32 GB

Specifications are subject to change without notice.



Additive Manufacturing & Welding



Muzzle Flash

OTHER SPECS & FEATURES	
TEC-Cooled cycle sensor cooling	Gig-E
Blackbody-free permanent calibration	Camera Link
16 bits dynamic range	Trigger In, Trigger out
Automatic exposure control (AEC)	SDI, GPS, IRIG-B, RS232 and thermistor ports
Enhanced high-dynamic-range imaging (EHDMI)	Lock-In recording
Weight: < 6 kg	Size: w/o lens: 12,6" x 7,8" (321 mm x 199 mm x 176 mm)

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