

FLIR SC6800

High Speed MWIR

Science-Grade Infrared Camera

The High Speed FLIR SC6800 offers high speed and high resolution with ease and flexibility in configuration for just about any scientific or research application.

Interface Flexibility – Multiple simultaneous analog and digital outputs including component video, HD-SDI, Camera Link Full, or CoaxPress.

Optimized Imaging – Four active preset operating modes provide adjustable integration times, embedded non-uniformity correction, and bad pixel replacement.

Triggering Control – Advanced triggering options through external BNC input, IRIG time, or a software trigger; clock out single images, multiple images, or multiple images from multiple presets.

Ultra Fast Frame Rate – Features fast frame rates with a high speed 200 megapixel clock that streams 14-bit digital data up to 565 Hz at full resolution.

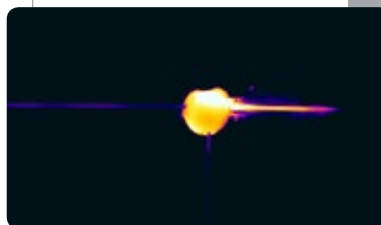
Windowing Flexibility – Supports FPA windowing for faster frame rates.

Frame Optimization – Output frame rate adjustable from 0.0015 Hz to the maximum frame rate at a given window size and integration time with 0.1 Hz resolution.

Frame Time-Stamping – IRIG-B timing built directly into camera for on-board deterministic time-stamping of each frame and advanced triggering options.

ResearchIR Software – Compatible with FLIR ResearchIR for data acquisition, analysis, and reporting; optional SDK.

On-Camera Cal – On-camera Radiance and Thermographic Calibration.



Stop Motion



F-15 jet



737 across the sun



Stop-motion image of spinning tire

Imaging Specifications

Detector	SC6800
Detector Type	Indium Antimonide (InSb)
Spectral Range	3.0 – 5.0 μm or 1.5 – 5.0 μm
Resolution	640 x 512
Detector Pitch	25 μm
NETD	<20 mK (18 mk typical)
Well Capacity	11.0 M electrons
Operability	>99.8% (>99.95% typical)
Sensor Cooling	Closed Cycle Rotary
Electronics / Imaging	
Readout	Snapshot
Readout Modes	Asynchronous Integrate While Read; Asynchronous Integrate Then Read
Synchronization Modes	Genlock; IRIG-B; Sync In, Sync Out
Image Time Stamp	Internal IRIG-B Decoder Clock / TSPI Accurate Time Stamp
Integration Time	480 ns to 687 sec
Frame Rate (Full Window)	Programmable 0.0015 Hz to 565 Hz
Subwindow Mode	User-Defined
Max Frame Rate (@ Min Window)	16,404 Hz @ 640 x 4
Dynamic Range	14-bit
Digital Data Streaming	Simultaneous Gigabit Ethernet and Camera Link or CoaxPress (CXP), HD-SDI
Analog Video	NTSC, PAL, S-Video, SVGA Component Video
Command & Control	Gigabit Ethernet, USB, RS-232, Camera Link or CXP
Measurement	
Standard Temperature Range	-20°C to 350°C (-4°F to 662°F)
Optional Temperature Range	Up to 1,500°C (2,732°F) Up to 2,000°C (3,632°F)
Accuracy	$\pm 2^\circ\text{C}$ or $\pm 2\%$ of reading
Optics	
Camera f/#	2.5 or 4.1
Available Lenses	25 mm, 50 mm, 100 mm, 1000 mm TFOV (50 / 250 / 500 mm) Continuous Zoom (50 / 500 mm) also 200 mm, 350 mm (both f/4)
Close-up Lenses / Microscopes	1x, 2.5x, 4x, 5x (5x requires f/4.1)
Focus	Manual (Motorized & Tactile – Lens-Dependent)
Filtering	Behind-the-Lens
Image Presentation	
Analog Palettes	Selectable 8-bit
AGC	Manual, Linear, Plateau Equalization, ROI, DDE
Analog Overlay	Customizable (IRIG-B, Date, Integration Time, Internal Temp, Frame Rate, Sync Mode, Cooler Hours)
Zoom	1-4x Digital with Pan
General	
Operating Temperature Range	-40°C to 50°C (-40°F to 122°F)
Storage Temperature Range	-55°C to 80°C (-67°F to 176°F)
Altitude	0 to 40,000 Feet Operational; 0 to 70,000 Feet Non-Operational
Shock / Vibration	40 g , 11 msec ½ sine pulse / 4.3 g RMS Random Vibration, All 3 Axis
Power	24 VDC (< 50 W steady state)
Weight w/o Lens	4.5 kg (10 lb)
Size (L x W x H) w/o Lens	218 x 143 x 158 mm (8.6 x 5.64 x 6.21 in)
Mounting	2 x ¼"-20, 1 x 3/8"- 16, 4 x 10/24



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Back Panel



- 1 Power Switch
- 2 Gigabit Ethernet
- 3 Status LEDs
- 4 SVGA-Video
- 5 Auxiliary Connector
- 6 Camera Link™ or CoaxPress (CXP)
- 7 Trigger In, Sync In, C-Video, Genlock In, Sync Out, IRIG-B
- 8 Power In
- 9 S-Video
- 10 USB Host
- 11 USB Client