FLIR SC6700 SLS

Science-Grade LWIR Infrared Camera

HIGH SENSITIVITY THERMAL IMAGES

The FLIR SC6700 SLS incorporates a cooled Strained Layer Superlattice (SLS) detector that operates in the 7.5 to 9.5 micron waveband producing crisp LWIR thermal imagery at 640x512 pixel resolution.

FAST IMAGE CAPTURE

The FLIR SC6700 SLS features fast frame rates with a high speed 50 megapixel clock that streams 14-bit digital data up to 125 Hz at full resolution. The FLIR readout supports FPA windowing for even higher frame rates. Output frame rates are adjustable from 0.0015 Hz to the maximum frame rate with 0.1 Hz resolution.

ADVANCED FILTERING

The FLIR SC6700 SLS incorporates an easy access, 4-position motorized filter wheel that permits effortless filter exchange in any environment. The camera automatically determines filter type, filter wheel position, and corresponding calibrations.

FLEXIBLE INTERFACE

The FLIR SC6700 SLS has multiple video interfaces that are simultaneously active and independently controlled providing flexibility for image display and recording.
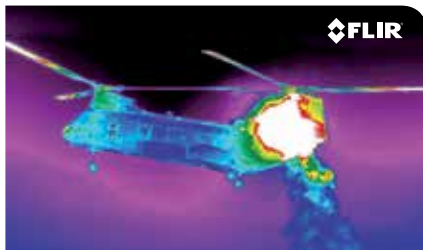
IMAGE TRIGGERING AND TIME STAMPING

The FLIR SC6700 SLS trigger options include external BNC input, IRIG time, or software to clock out single images, multiple images, or multiple images from multiple presets. IRIG-B timing is built directly into camera for on-board deterministic time stamping of each image frame.

SOFTWARE

The FLIR SC6700 SLS camera works seamlessly together with FLIR ResearchIR Max software enabling intuitive viewing, recording and advanced processing of the thermal data provided by the camera. A Software Developers Kit (SDK) is optionally available.

KEY FEATURES

- HIGH RESOLUTION 640 X 512 LWIR IMAGERY

- FAST SNAP SHOT IMAGE INTEGRATION

- ADVANCED FILTER WHEEL DESIGN

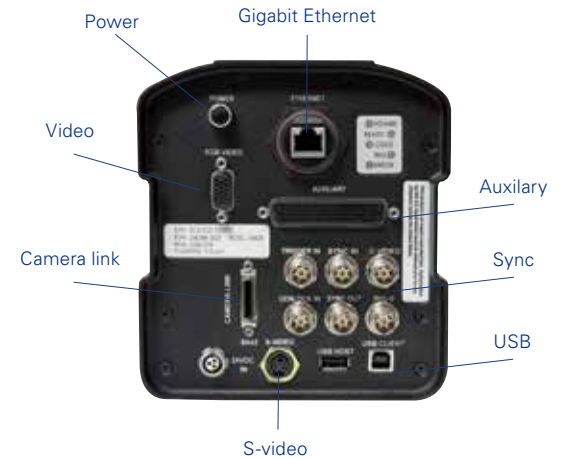- ON-CAMERA RADIANCE AND THERMOGRAPHIC CALIBRATION

Thermal image of a helicopter

Stop-motion image of spinning tire

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Imaging Specifications

System Overview	SC6700 SLS
Detector Type	Strained Layer Superlattice (SLS)
Spectral Range	7.5 - 9.5 µm
Resolution	640 × 512
Detector Pitch	15 µm
NETD	<30mK
Well Capacity	7.2 M electrons
Operability	>98%
Sensor Cooling	FLIR Closed Cycle Rotary
Electronics / Imaging	
Readout Type	Snapshot (FLIR 4 Channel)
Readout Mode	Asynchronous Integrate While Read; Asynchronous Integrate Then Read
Synchronization Modes	Genlock; Frame Sync Starts Integration; Frame Sync Starts Readout
Image Time Stamp	Internal IRIG-B Decoder Clock / TSPI Accurate Time Stamp
Integration Time	500 ns to Full Frame
Pixel Clock	50 MHz
Frame Rate (Full Window)	Programmable 0.0015 Hz to 125 Hz
Subwindow Mode	User Defined
Dynamic Range	14 bit
Digital Data Streaming	Simultaneous Gigabit Ethernet and Camera Link
Analog Video	NTSC, PAL, S-Video, SVGA
Command & Control	Gigabit Ethernet, USB, RS-232, Camera Link
Temperature Measurement	
Standard Temperature Range	-20C to +650C (-4F to +1200F)
Optional Temperature Range	Up to 1,500°C (2,732°F) Up to 2,000°C (3,632°F)
Optics	
Camera f/#	f/2.5 or f/4.0
Available Lenses	13mm, 25mm, 50mm, 100mm, 200mm
Filtering	Internal 4 position filter wheel and optional Custom Cold Filtering
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 . Sine Pulse / 4.3 g RMS Random Vibration, All 3 Axis
Power	24 VDC
Weight w/o Lens	4.5 kg (10 lb)
Size (L × W × H) w/o Lens	218 × 143 × 158 mm (8.6 × 5.64 × 6.21 in)
Mounting	2 × .''-20, 1 × 3/8''– 16, 4 × 10/24

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