



# FLIR SC6700

Science-Grade MWIR InSb Infrared Camera

## HIGH SENSITIVITY THERMAL IMAGES

The FLIR SC6700 incorporates a cooled FLIR Indium Antimonide (InSb) detector that operates in the 3 to 5 or 1 to 5 micron waveband. It produces crisp thermal images of 640 x 512. Four active preset operating modes provide adjustable integration times, embedded non-uniformity correction, and bad pixel replacement.

## FAST IMAGE CAPTURE

The FLIR SC6700 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 time with 0.1 Hz resolution.

## ADVANCED FILTERING

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

## FLEXIBLE INTERFACE

The FLIR SC6700 has multiple simultaneous analog and digital outputs including S-video, composite (BNC) NTSC and PAL, SVGA and industry-standard digital Camera Link and GigE Vision Ethernet

## IMAGE TRIGGERING AND TIME STAMPING

The FLIR SC6700 triggering 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

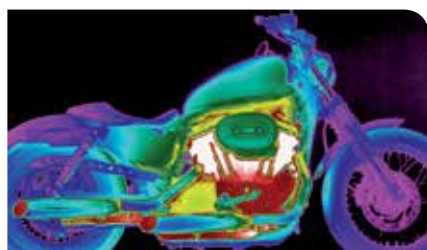
The FLIR SC6700 camera works seamlessly together with FLIR ResearchIR Max software enabling intuitive viewing, recording and advanced processing of the thermal data provided by the camera. A Software Developers Kit (SDK) is optionally available.

## MATHWORKS® MATLAB

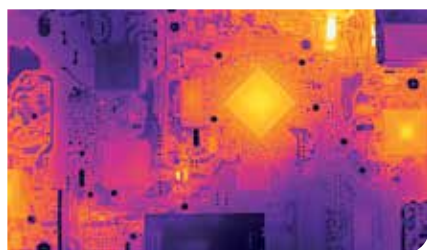
Control the SC6700 and capture data directly into MathWorks® MATLAB software for advanced image analysis and processing.

## KEY FEATURES

- FLIR built InSb detector & cryo cooler
- high quality 640 x 512 MWIR imagery
- Fast snap shot image integration
- Advanced filter wheel design
- On-camera radiance and thermographic calibration



Thermal image of a motorcycle

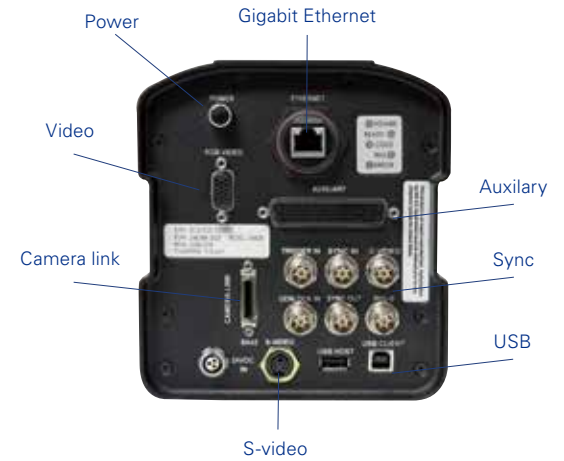


Thermal image of a PCB board



## IMAGING SPECIFICATIONS

System Overview		SC6700 MWIR	
Detector Type	Indium Antimonide (InSb)		
Spectral Range	3.0 – 5.0 µm or 1.0 – 5.0µm		
Resolution	640 x 512		
Detector Pitch	15 µm		
NETD	<30mK		
Well Capacity	7.2 M electrons		
Operability	>99.8% (99.95% typical)		
Sensor Cooling	FLIR Closed Cycle Rotary		
Electronics			
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	-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)		
Optics			
Camera f/#	f/2.5 or f/4.0		
Available Lenses	13mm, 25mm, 50mm, 100mm, 200mm		
Close-up Lenses / Microscopes	1x and 4x		
Filtering	Internal 4 position filter wheel and optional Custom Cold Filtering		
Lens Options			
Available Lenses	13mm, 25mm, 50mm, 100mm, 200mm		
Close-up Lenses / Microscopes	1x and 4x		
Filtering	Internal 4 position filter wheel and optional Custom Cold Filtering		
Lens Options			
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 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 ."-20, 1 x 3/8"-16, 4 x 10/24		



## FILTERS-OPTIONALLY AVAILABLE

Filter ID	FLIR Part No.	Filter Type
1	25730-001	ND 1.0
2	25730-002	ND 2.0
3	25730-003	ND 3.0
4	25730-004	ND 0.3
5	25730-005	ND 0.6
6	25730-006	ND 1.45
7	25730-007	Standard MWIR
8	25730-008	ATM
9	25730-009	Solar Block (SRX)
10	25730-010	Thru Glass (TGL)
11	25730-011	Glass High Temp (GHT)
12	25730-012	Narrow Band Flame or HT
13	25730-013	Broad Band Flame
14	25730-014	Polyethelene (PEN)
15	25730-015	Plastic
16	25730-016	CO2
17	25730-017	Nitrous-Oxide
18	25730-018	COS

**PORTLAND**  
Corporate Headquarters  
FLIR Systems, Inc.  
27700 SW Parkway Ave.  
Wilsonville, OR 97070  
USA  
PH: +1 866.477.3687

**NASHUA**  
FLIR Systems, Inc.  
9 Townsend West  
Nashua, NH 06063  
USA  
PH: +1 603.324.7611

**BELGIUM**  
FLIR Systems Trading  
Belgium BVBA  
Luxemburgstraat 2  
2321 Meer  
Belgium  
PH: +32 (0) 3665 5100

**UK**  
FLIR Systems UK  
2 Kings Hill Avenue  
Kings Hill  
West Malling - Kent  
ME19 4AQ  
United Kingdom  
PH: +44 (0)1732 220 011

**SWEDEN**  
FLIR Systems AB  
Antennvägen 6,  
PO Box 7376  
SE-187 66 Täby  
Sweden  
PH: +46 (0)8 753 25 00

www.flir.com  
NASDAQ: FLIR

Specifications are subject to change without notice  
©Copyright 2014, FLIR Systems, Inc. All other brand and product names  
are trademarks of their respective owners. The images displayed may not  
be representative of the actual resolution of the camera shown. Images for  
illustrative purposes only. (Created 08/14)