

# FLIR SC6000 MWIR Series

## Science-Grade Infrared Camera

The versatile FLIR SC6000 Series 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 S-video, composite (BNC) NTSC and PAL, SVGA, and industry-standard digital Camera Link and Gigabit Ethernet.

**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.

**Fast Frame Rates** – Features fast frame rates with a high speed 50 megapixel clock that streams 14-bit digital data up to 126 Hz at full resolution.

**Windowing Flexibility** – Supports FPA windowing for faster frame rates.

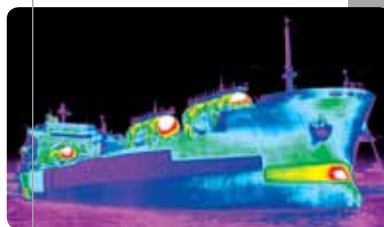
**Frame Optimization** – Output frame rate adjustable from 0.0015 Hz to the maximum frame rate at a given window size and integration time with 0.1 Hz resolution.

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

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

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

**Filter Wheel** – Exclusive SC6700 4-position motorized filter wheel that permits effortless filter exchange in any environment.



Tanker with chemicals in the bow



F-15 jet



737 across the sun



Stop-motion image of spinning tire

## Imaging Specifications

Detector	SC6100	SC6700
Detector Type	Indium Antimonide (InSb)	
Spectral Range	3.0 – 5.0 µm or 1.5 – 5.0 µm	3.0 – 5.0 µm or 1.0 – 5.0 µm
Resolution	640 x 512	
Detector Pitch	25 µm	15 µm
NETD	<20 mK (18 mk typical)	
Well Capacity	Gain 0: 11 M electrons Gain 1: 8.3 M electrons Gain 2: 5.5 M electrons Gain 3: 2.8 M electrons	7.2 M electrons
Operability	>99.8% ( >99.95% typical)	
Sensor Cooling	Closed Cycle Linear	Closed Cycle Rotary
<b>Electronics / Imaging</b>		
Readout	Snapshot (FLIR 4 Channel)	
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 / TSP1 Accurate Time Stamp	
Integration Time	10 µsec to 687 sec	480 ns to 687 sec
Frame Rate (Full Window)	Programmable 0.0015 Hz to 126 Hz	
Subwindow Mode	User-Defined	
Max Frame Rate (@ Min Window)	35.112 kHz (64 x 4)	4.175 kHz (16 x 4)
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	
<b>Measurement</b>		
Standard Temperature Range	-20°C to 350°C (-4°F to 662°F) - f/2.5 -20°C to 500°C (-4°F to 932°F) - f/4.1	-20°C to 350°C (-4°F to 662°F) - f/2.5 -20°C to 500°C (-4°F to 932°F) - f/4.0
Optional Temperature Range	Up to 1,500°C (2,732°F) Up to 2,000°C (3,632°F)	
Accuracy	±2°C or ±2% of reading	±2°C or ±2% of reading
<b>Optics</b>		
Camera f/#	2.5 or 4.1	2.5 or 4.0
Available Lenses	25 mm, 50 mm, 100 mm, 1000 mm TFOV (50 / 250 / 500 mm) Continuous Zoom (50 / 500 mm)	
Close-up Lenses / Microscopes	1x, 2.5x, 4x, 5x (5x requires f/4.1)	—
Focus	Manual (Motorized & Tactile – Lens-Dependent)	
Filtering	Behind-the-Lens	4x Position Motorized & Behind the Lens
<b>Image Presentation</b>		
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	
<b>General</b>		
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	

### SC6000 Packages

SC6100 ExaminIR Recording and Analysis Package: SC6100, 50 mm Lens, Extender Rings, Temperature Calibration, Multi-IT, Triggering, IRIG-B, ExaminIR Max Software

SC6700 ExaminIR Recording and Analysis Package: SC6700, 50 mm Lens, Extender Rings, Temperature Calibration, Integrated Filter Wheel, Multi-IT, Triggering, IRIG-B, ExaminIR Max Software

\*Ask your FLIR representative about additional packages

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### Back Panel



- ① Power Switch
- ② Gigabit Ethernet
- ③ Status LEDs
- ④ SVGA-Video
- ⑤ Auxiliary Connector
- ⑥ Camera Link™
- 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