

## LWIR THERMAL IMAGING CAMERA

# FLIR A6750sc SLS™

The FLIR A6750sc SLS incorporates a cooled Strained Layer Superlattice (SLS) detector that operates in the 7.5 to 10.5  $\mu\text{m}$  waveband, to produce crisp, 640 x 512 pixel thermal imagery. Record high-speed data at up to 4.1 kHz with windowing, and synchronize with other instruments to ensure you never miss any data.

[www.flir.com/science](http://www.flir.com/science)

### FAST INTEGRATION TIMES

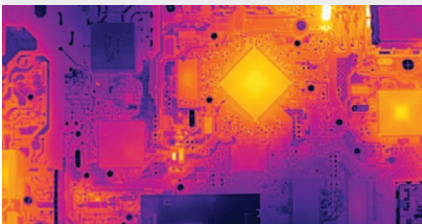
The FLIR A6750sc SLS captures all pixels simultaneously in under 190  $\mu\text{s}$  for room temperature scenes. This is particularly important when monitoring fast moving objects where an uncooled thermal imaging camera would suffer from image blur. The camera supports image frame rates up to 4.1 kHz when operating in windowing mode.

### STANDARD VIDEO INTERFACES

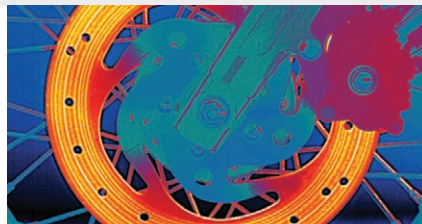
The FLIR A6750sc SLS is a true plug-and-play thermal imaging camera, with a standard GigE Vision® interface to transmit full dynamic range digital video and GenICam for camera control. Additional interfaces include a BNC analog video output. The Gigabit Ethernet and analog video are simultaneously active yet independently controlled allowing greater flexibility for recording and display purposes.

### SEAMLESS SOFTWARE INTEGRATION

The FLIR A6750sc SLS camera works seamlessly 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. Control the A6750sc SLS and capture data directly into MathWorks® MATLAB software for custom image analysis and enhancement.



Electronics microscopy



Motorcycle brake testing

## IMAGING SPECIFICATIONS

System Overview	A6750sc SLS
Detector Type	Strained Layer Superlattice (SLS)
Spectral Range	7.5 – 10.5 $\mu\text{m}$
Resolution	640 x 512
Detector Pitch	15 $\mu\text{m}$
NETD	<18 mK
Well Capacity	7.2 M electrons
Operability	>98%
Sensor Cooling	FLIR Closed Cycle Rotary

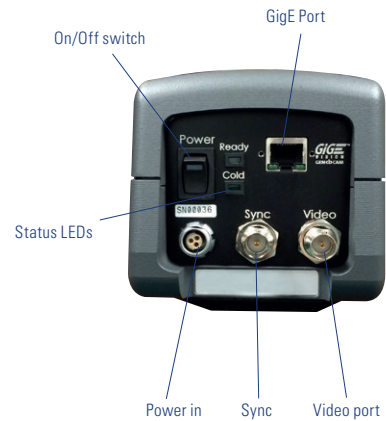
Electronics/Imaging	
Readout	Snapshot (FLIR 4 Channel)
Readout Modes	Asynchronous Integrate While Read; Asynchronous Integrate Then Read
Synchronization Modes	Sync In, Sync Out
Integration Time	500 ns to full frame
Frame Rate (Full Window)	Programmable 0.0015 Hz to 125 Hz
Subwindow Modes	Full, 1/2 or 1/4 Window
Max Frame Rate	4,175 Hz (16 x 4)
Dynamic Range	14-bit
Digital Data Protocol	Gigabit Ethernet
Analog Video	NTSC, PAL
Camera Control	Gigabit Ethernet and RS-232

Measurement	
Standard Temperature Range	-20°C to 650°C (-4°F to 1,202°F)
Optional Temperature Range	Up to 1,500°C (2,732°F), Up to 2000°C (3632°F), Up to 3,000°C (5,432°F)
Accuracy	$\pm 1^\circ\text{C}$ or $\pm 1\%$ of reading, $0^\circ\text{C}$ to $3000^\circ\text{C}$

Optics	
Camera f/Number	f/4.0 or f/2.5
Available Lenses	17 mm, 25 mm, 50 mm, 100 mm, 200 mm Close-up/Microscope: 1x
Focus	Manual
Filtering	Behind the lens, custom cold filtering

Analog Video	
Analog Palettes	Selectable 8-bit
AGC	Manual, Linear, Plateau equalization, ROI, DDE
Digital Zoom	1x, 4x

General	
Operating Temperature Range	-20°C to 50°C (-4°F to 122°F)
Storage Temperature Range	-55°C to 80°C (-67°F to 176°F)
Altitude	0 to 10,000 ft operational; 0 to 70,000 ft non-operational
Shock / Vibration	40 g, 11 msec 1/2 sine pulse / 4.3 g RMS Random Vibration, All 3 Axis
Power	24 VDC (< 50 W steady state)
Weight w/o Lens	2.3 kg (5 lbs)
Size (L x W x H) w/o Lens	216 x 102 x 109 mm (8.5 x 4.0 x 4.3 in)
Mounting	2 x 1/4"–20, 1 x 3/8"–16, 4 x 10/24



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7-1683-INS-A6750sc SLS Datasheet



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