



# FLIR A6750sc SLS

Longwave Infrared Thermal Camera

The FLIR A6750sc 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 INTEGRATION TIMES

Working in snapshot mode, the FLIR A6750sc SLS is able to capture all pixels from a scene simultaneously in under 190 $\mu$ 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 4.1k frames per second when operating in windowing mode.

## STANDARD VIDEO INTERFACES

Using a standard GigE Vision<sup>®</sup> interface to transmit full dynamic range digital video, and GenICam for camera control, the FLIR A6750sc SLS is a true “plug and play” thermal imaging camera. 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.

## CUSTOM COLD FILTERS AVAILABLE

Custom cold filtering options for specific spectral detection and measurement are available.

## SOFTWARE

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.

## COMPATIBLE WITH 3RD PARTY SOFTWARE

Control the A6750sc SLS and capture data directly into MathWorks<sup>®</sup> MATLAB software for custom image analysis and enhancement.

## KEY FEATURES

- EXCELLENT LWIR IMAGE QUALITY: 640 X 512 PIXELS
- HIGH SPEED IMAGE ACQUISITION:  
UP TO 4.1kHz IN WINDOWING MODE
- SYNCHRONIZATION WITH OTHER INSTRUMENTS AND EVENTS
- WIDE TEMPERATURE RANGES UP TO +2000°C
- MATLAB COMPATIBILITY



Circuit board



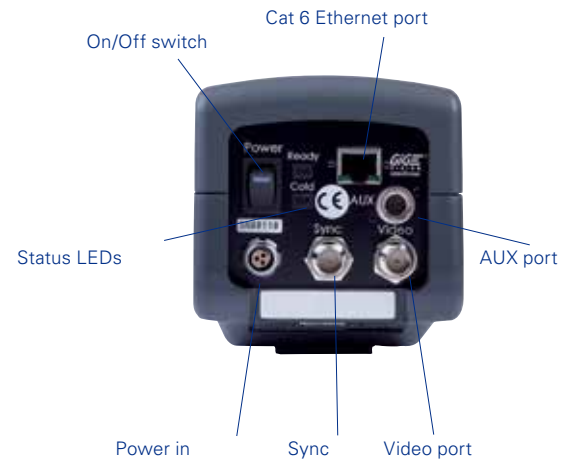
Motorcycle disc brake system



## Imaging Specifications

<b>Detector</b>		<b>A6750sc SLS</b>
Detector Type	Strained Layer Superlattice (SLS)	
Spectral Range	7.5 - 9.5 $\mu\text{m}$	
Resolution	640 x 512	
Detector Pitch	15 $\mu\text{m}$	
NETD	<30mK	
Well Capacity	7.2 M electrons	
Operability	>98%	
Sensor Cooling	Closed Cycle Rotary	
<b>Electronics / Imaging</b>		
Readout	Snapshot (FLIR 4 Channel)	
Readout Modes	Asynchronous Integrate While Read; Asynchronous Integrate Then Read	
Synchronization Modes	Sync In, Sync Out, Trigger In	
Integration Time	480 ns to 687 sec	
Frame Rate (Full Window)	Programmable 0.0015Hz to 125Hz	
Subwindow Mode	User Defined Size, Centered in Image	
Max Frame Rate (@ Min Window)	4,175Hz (16 x 4)	
Dynamic Range	14-bit	
Digital Data Streaming	Gigabit Ethernet	
Analog Video	NTSC, PAL	
Command & Control	Gigabit Ethernet and RS-232	
<b>Measurement</b>		
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 2,000°C (3,632°F)	
Accuracy	$\pm 2^\circ\text{C}$ or $\pm 2\%$ of reading	
<b>Optics</b>		
Camera f/#	2.5 or 4.0	
Available Lenses	13mm, 25mm, 50mm, 100mm, 200mm	
Focus	Manual	
Filtering	Behind the Lens, Custom Cold Filtering	
<b>Image Presentation</b>		
Analog Palettes	Grayscale + Color	
AGC	Manual, Linear, Plateau Equalization, DDE	
Zoom	Video Zoom is Auto Selected: Full Res = 1x, 1/4 Res = 2x	
<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 10,000 Feet Operational; 0 to 70,000 Feet 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	5 lbs	
Size (L x W x H ) w/o Lens	7.7" x 4.0" x 4.0"	
Mounting	2 x 1/4"-20, 1 x 3/8"-16, 4 x 10/24	

## Back Panel



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