

## FLIR A6700sc



### Compact, thermal imaging camera with cooled InSb detector at an extremely affordable price.

Designed for electronics inspections, medical thermography, manufacturing monitoring, and non-destructive testing, FLIR A6700sc is ideal for high-speed thermal events and moving targets.

*FLIR A6700sc  
thermal imaging camera*

#### High sensitivity, crisp thermal images

FLIR A6700sc incorporates a cooled Indium Antimonide (InSb) detector that operates in the 3- to 5-micron waveband. Optionally, a broadband version that operates in the 1-5 micron waveband is available. Both versions produce crisp thermal images of 640 x 512. Achieving a high thermal sensitivity of <20 mK, FLIR A6700sc is able to capture the finest image details and temperature difference information.

#### Synchronization and triggering

Precise camera synchronization and triggering makes the cameras ideal for high-speed, high sensitivity applications. Working in snapshot mode the FLIR A6700sc is able to register all pixels from a thermal event simultaneously. This is particularly important when monitoring fast moving objects where a standard thermal imaging camera would suffer from image blur. The camera supports image frame rates up to 480 frames per second when operating in windowing mode.

Using a standard GigE Vision™ interface to transmit both commands and full dynamic range digital video FLIR A6700sc is a true “plug and play” thermal imaging camera. Simultaneous analog and digital outputs are available.

#### Cold filters available

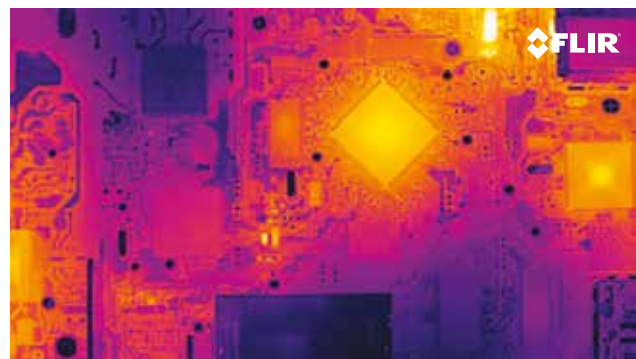
Custom cold filtering options for specific spectral detection and measurement are available. Perfect for imaging through glass, measuring temperature of thin film plastics, filtering different wavebands for laser profiling and detection, or optical gas imaging

#### Software

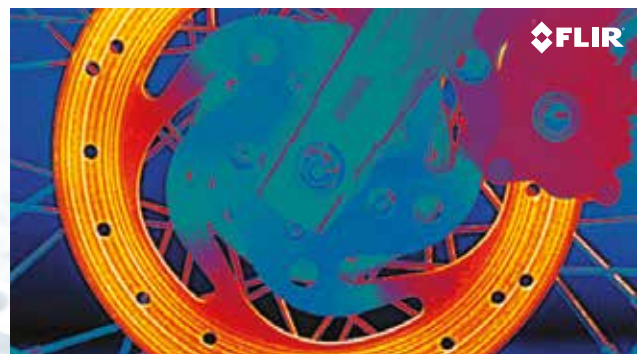
FLIR A6700sc camera works seamlessly together with FLIR ResearchIR Max software enabling intuitive viewing, recording and advanced processing of the thermal data provided by the camera. Each camera comes standard with this especially for R&D applications developed software. A Software Developers Kit (SDK) is optionally available.

#### Key features

- Excellent image quality: 640 x 512 pixels
- High sensitivity: <20 mK
- High speed image acquisition: up to 480 Hz
- Synchronization: with other instruments
- Extender rings available
- Wide choice of optics
- Very low noise: cryogenically cooled InSb Detector



*Circuit board*



*Motorcycle disc braking system*

## Technical specifications



Detector	
Detector Type	Indium Antimonide (InSb)
Spectral Range	3 – 5 µm or 1 - 5 µm
Resolution	640 × 512
Detector Pitch	15 µm
NETD	<20 mK (18 mk typical)
Well Capacity	7.2 M electrons
Operability	>99.8% (>99.95% typical)
Sensor Cooling	Closed Cycle Rotary
Electronics / Imaging	
Readout	Snapshot
Readout Modes	Asynchronous Integrate While Read; Asynchronous Integrate Then Read
Synchronization Modes	Sync In
Integration Time	480 ns to 687 sec
Frame Rate (Full Window)	Up to 60Hz, full res Up to 480Hz, 1/4 res
Subwindow Mode	1/2 or 1/4 Window
Max Frame Rate (@ Min Window)	480Hz @ 1/4 window
Dynamic Range	14-bit
Digital Data Streaming	Gigabit Ethernet (GigE Vision)
Analog Video	NTSC, PAL
Camera Control	Genicam
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)
Accuracy	± 2°C or ±2% of reading
Optics	
f/#	f/4.0 or f/2.5
Available Lenses	3-5µm: 13mm, 13mm (low distortion), 25mm, 50mm, 100mm (all lenses are f/2.5) 1-5µm: 25mm, 50mm, 100mm (lenses are f/2.5)
Microscopes	1x (this lens is f/4 and requires an f/4 camera)
Focus	Manual
Filtering	Removable Behind the Lens or Permanent "cold" Filter Available
Image Presentation	
Analog Palettes	Selectable 8-bit
AG	Manual, Linear, Plateau Equalization, DDE
Zoom	Video Zoom is Auto Selected: Full Res = 1x, 1/4 Res = 2x
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 10,000 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	5 lbs / 2,3 kg
Size (L x W x H ) w/o Lens	7.7 x 4.0 x 4.0" / 19.6 x 10.2 x 10.2 cm
Mounting	2 x ¼"-20, 1 x 3/8"-16, 4 x 10/24

### FLIR Commercial Systems

Luxemburgstraat 2  
B-2321 Meer  
Belgium  
Tel. : +32 (0)3 665 51 00  
Fax : +32 (0)3 303 56 24  
e-mail: flir@flir.com

### FLIR Systems, Inc.

9 Townsend West  
Nashua, NH 06063  
USA  
PH: +1 866.477.3687  
PH: +1 603.324.7611

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

**Available lenses:** 3-5µm: 13mm, 13mm (low distortion), 25mm, 50mm, 100mm (all lenses are f/2.5)  
1-5µm: 25mm, 50mm, 100mm (lenses are f/2.5)

**Microscopes:** 1x (this lens is f/4 and requires an f/4 camera)



1. On/Off switch
2. Cat 6 Ethernet port
3. Status LEDs
4. Power in
5. Sync
6. Video port

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

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The images displayed may not be representative of the actual resolution of the camera shown. Images for illustrative purposes only.