



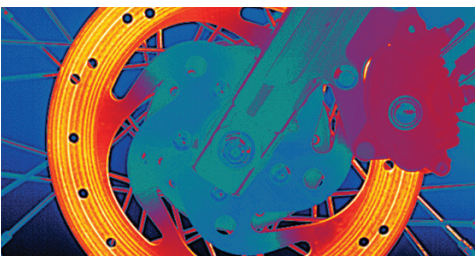
THERMAL IMAGING CAMERA WITH FLIR COOLED INSB DETECTOR

FLIR A6700 MWIR



The FLIR A6700 MWIR incorporates a cooled indium antimonide (InSb) detector that operates in the 3.0–5.0 μm waveband, or as a broadband model, in the 1.0–5.0 μm waveband. Both versions produce crisp, 640 x 512-pixel thermal images. Achieving a high thermal sensitivity of <math><20\text{ mK}</math>, FLIR A6700 MWIR is able to capture the finest image details. High-speed image acquisition up to 480 Hz and synchronization with other instruments and events capture minute details while available custom cold filtering options allow specific spectral detection and measurement—perfect for imaging through glass, measuring temperature of thin film plastics, laser profiling and detection, or optical gas imaging.

www.flir.com/science



FAST INTEGRATION TIMES

Capture high-sensitivity images of fast moving objects

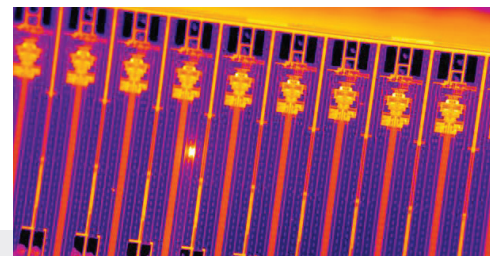
Working in snapshot mode, the FLIR A6700 MWIR is able to capture all pixels from a scene simultaneously. This is particularly important when monitoring fast moving objects where an uncooled thermal imaging camera would suffer from image blur. The camera supports image frame rates up to 480 frames per second when operating in windowing mode.



STANDARD VIDEO INTERFACES

“Plug and play” thermal imaging reduces set-up time

Using a standard GigE Vision® interface to transmit full dynamic range digital video, and GenICam for camera control, the FLIR A6700 MWIR 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.



FLEXIBLE SOFTWARE COMPATIBILITY

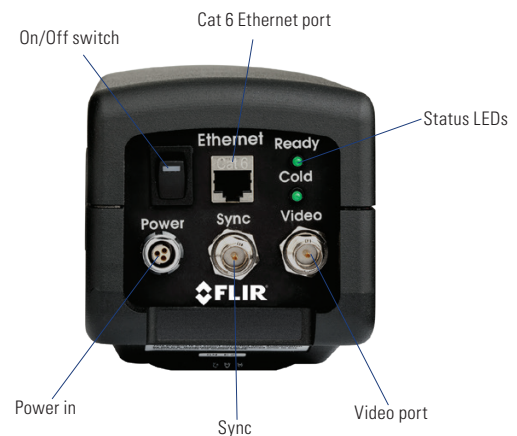
Various software options allow custom image analysis and processing

Control the A6700 MWIR and capture data directly into MathWorks® MATLAB software for custom image analysis and enhancement. The FLIR A6700 MWIR camera also 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.

SPECIFICATIONS

System Overview	
Detector Type	FLIR indium antimonide (InSb)
Spectral Range	3–5 μm or 1–5 μm
Resolution	640 \times 512
Detector Pitch	15 μm
NETD	<20 mK (3–5 μm) or <25 mK (1–5 μm)
Well Capacity	7.2 M electrons
Operability	>99.8% (>99.95% typical)
Sensor Cooling	FLIR Closed Cycle Rotary
Electronics / Imaging	
Readout	Snapshot
Readout Modes	Asynchronous Integrate While Read; Asynchronous Integrate Then Read
Synchronization Modes	Frame Sync
Integration Time	480 ns to full frame
Subwindow Modes	Full, 1/2 or 1/4 Window
Max Frame Rate	60 Hz @ full window 240 Hz @ 1/2 window 480 Hz @ 1/4 window
Dynamic Range	14-bit
Digital Data Protocol	Gigabit Ethernet (GigE Vision 2.0)
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	$\pm 1^\circ\text{C}$ or $\pm 1\%$ of reading (0°C to 3000°C)
Optics	
f/#	f/4.0 or f/2.5
Available Lenses	3–5 μm : 17 mm, 25 mm, 50 mm, 100 mm, 200 mm 1–5 μm : 25 mm, 50 mm, 100 mm
Microscopes	1x (f/2.5)
Focus	Manual
Filtering	Removable Behind-the-Lens or permanent "cold" filter available

Analog Video	
Analog Palettes	Selectable 8-bit
AGC	Manual, Linear, Plateau Equalization, DDE
Digital Zoom	Video zoom is auto-selected: 1x for full and 1/2 window, 2x for 1/4 window
General	
Operating Temperature Range	-40°C to 50°C (-40°F to 122°F)
Altitude	0 to 10,000 ft operational; 0 to 70,000 ft non-operational
Shock / Vibration	40 g, 11 msec $\frac{1}{2}$ sine pulse / 4.3 g RMS random vibration, all 3 axes
Power	24 VDC (<50 W steady-state)
Weight w/o Lens	5 lbs / 2,3 kg
Size (L \times W \times H) w/o Lens	216 \times 102 \times 109 mm (8.5 \times 4.0 \times 4.3 in)
Mounting	2 \times $\frac{1}{4}$ "-20, 1 \times $\frac{3}{8}$ "-16, 4 \times 10/24



Specifications are subject to change without notice. For the most up-to-date specs, go to www.flir.com

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18-2816-INS-A6700 MWIR



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