

FLIR A8000sc-Series

Compact, High Definition, MWIR Performance Cameras



The FLIR A8000sc-Series offers compact, high sensitivity MWIR cameras that produce low-noise HD thermal images. With short exposure times and crisply detailed images, A8000sc-Series cameras are the perfect choice for electronics inspection, aerial thermal mapping, non-destructive material testing, and industrial R&D applications.

High-Speed, High Sensitivity

The A8000sc-Series incorporates a cooled FLIR indium antimonide (InSb) detector that operates in the 3-5 μm waveband and produces crisp, HD thermal images. Achieving a high thermal sensitivity with very low noise (typically <20 mK), FLIR 8000sc-Series cameras are able to capture the finest image details.

Fast Integration Times

Working in snapshot mode, the A8000sc-Series is able to record 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 faster frame rates when operating in windowing mode.

Standard Video Interfaces

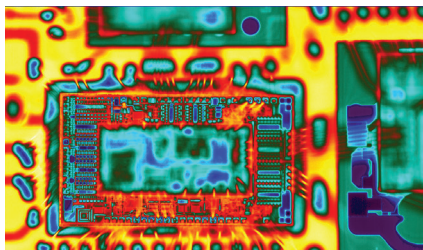
The A8000sc-Series offers true plug and play connectivity, with standard GigE Vision® and CoaXpress™ interfaces to transmit full dynamic range digital video, and GenICam for camera control. The HD-SDI video interfaces are simultaneously active yet independently controlled allowing greater flexibility for recording and display purposes.

Advanced Software Compatibility

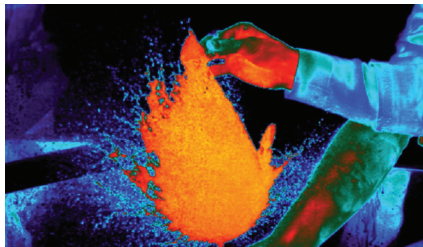
The A8000sc-Series cameras work seamlessly with FLIR ResearchIR Max or with third-party software such as MathWorks® MATLAB, for intuitive viewing, recording and advanced processing of the infrared data. A Software Developers Kit (SDK) is optionally available.

Key Features

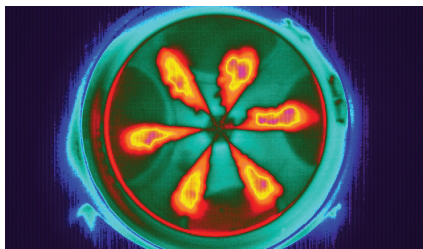
- 1280 x 720 or 1024 x 1024 true HD thermal imagery
- High sensitivity and low noise (<20 mK)
- Small target measurement down to 3.5 μm (A8300sc) or 4.5 μm (A8200sc)
- HD-SDI video output
- Wide choice for optics



Record microscopic images of silicon chips and electronics



Fast frame rates and integration speeds allow for stop-motion thermal imagery



Freezing action such as an engine fuel spray increases temperature measurement accuracy



Specifications

System Overview	FLIR A8200sc	FLIR A8300sc
Detector Type	FLIR indium antimonide (InSb)	
Spectral Range	3.0 – 5.0 μ m	
Resolution	1024 x 1024	1280 x 720
Detector Pitch	18 μ m	14 μ m
Thermal Sensitivity/NE δ T	< 20 mK*	
Well Capacity	2.0 M electrons	5.9 M electrons
Operability	>99.5% (99.9% typical)	
Sensor Cooling	Closed Cycle Linear	
Electronics/Imaging		
Readout	Snapshot	
Readout Modes	Asynchronous integrate while read Asynchronous integrate then read	
Synchronization Modes	Sync-in, Sync-out	
Minimum Integration Time	480 ns	
Max Frame Rate	50 Hz full frame	60 Hz full frame
Subwindow Mode	Flexible (steps of 16 columns, 8 rows)	
Dynamic Range	14-bit	
Digital Data Protocol	Gigabit Ethernet (GigE Vision [®] 2.0) & CoaXPress	
HD Video	HD-SDI (720p/50/59.9, 1080p/25/29.9)	
Camera Control	GenICam, RS-232	
Temperature 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 3,000°C (5,432°F)	
Optics		
Camera f/Number	f/4.0	
Available Lenses	17 mm, 25 mm, 50 mm, 100 mm, 200 mm	
Close-up Lenses/Microscopes	1x, 4x	
Focus	Manual	
Filtering	Behind-the-lens filter holder	
Image/Video Presentation		
Palettes	Selectable 8-bit	
Automatic Gain Control	Linear, PE, DDE	
Video Zoom	Auto selected; 1x: 1/4 to full window, 2x: <1/4 window	
General		
Operating Temperature Range	-20°C to 50°C (-4°F to 122°F)	
Shock / Vibration	40 g, 11 msec 1/2 sine pulse / 4.3 g RMS random vibration, all 3 axes	
Power	24 VDC (<50 W steady state)	
Weight w/Handle, w/o Lens	8.2 lbs (3.73 kg)	
Size (L x W x H) w/o Lens, Handle	8.9 x 4.6 x 5.3 in (226 x 117 x 135 mm)	
Mounting	2 ea. 1/4-20 tapped holes 1 ea. 3/8-16 tapped hole 4 ea. 10-24 tapped holes	

* NE δ T is measured at 50% well-fill, using a 25°C scene

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Specifications are subject to change without notice.

For the most up-to-date specifications, go to www.flir.com

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