

FLIR A8300sc

Compact, High Definition, MWIR performance camera



HIGH SENSITIVITY, HD THERMAL IMAGES

The A8300sc incorporates a cooled FLIR Indium Antimonide (InSb) detector that operates in the 3 to 5 micron waveband. It produces crisp mega pixel thermal images of 1280 x 720. Achieving a high thermal sensitivity with very low noise (typically <math><20\text{mK}</math>), the FLIR A8300sc is able to capture the finest image details.

FAST INTEGRATION TIMES

Working in snapshot mode, the FLIR A8300sc 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 faster frame rates when operating in windowing mode.

STANDARD VIDEO INTERFACES

Using a standard GigE Vision® or USB3 Vision™ interface to transmit full dynamic range digital video, and GenICam for camera control, the FLIR A8300sc is a true “plug and play” thermal imaging camera. Additional interfaces include BNCs for CoaXPress (CXP) and HD-SDI video output. The video interfaces are simultaneously active yet independently controlled allowing greater flexibility for recording and display purposes.

SOFTWARE

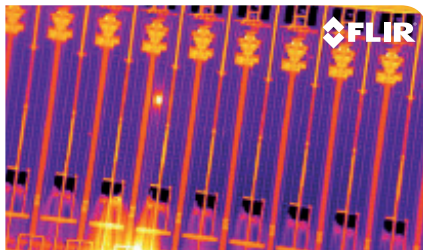
The FLIR A8300sc camera works seamlessly with FLIR ResearchIR Max software enabling intuitive viewing, recording and advanced processing of the infrared data provided by the camera. A Software Developers Kit (SDK) is optionally available.

COMPATIBLE WITH 3RD PARTY SOFTWARE

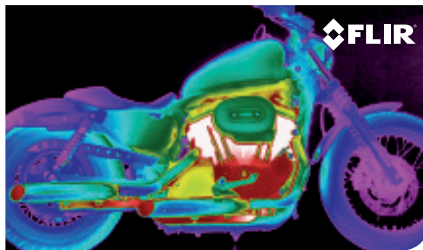
Control the A8300sc and capture data directly into MathWorks® MATLAB software for advanced image analysis and enhancement.

KEY FEATURES

- TRUE HD IMAGERY WITH 1280 X 720 PIXELS
- HIGH SENSITIVITY LOW NOISE: 20MK
- SMALL TARGET MEASUREMENT DOWN TO 3.5 μm
- HD-SDI VIDEO OUTPUT
- WIDE CHOICE OF OPTICS



Electronics microscopy



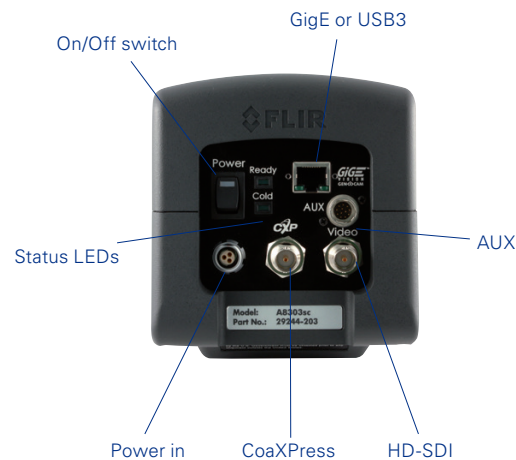
Motorcycle thermal validation

USB VISION GIGE VISION

MathWorks GEN<i>CAM

Imaging Specifications

System Overview	FLIR A8300sc
Detector Type	FLIR Indium Antimonide (InSb)
Spectral Range	3.0 – 5.0 μm
Resolution	1280 x 720
Detector Pitch	14 μm
NETD	<20 mk
Well Capacity	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
Integration Time	500 ns to Full Frame
Max Frame Rate	60Hz @ Full Window 165Hz @ 1/2 Window 388Hz @ 1/4 Window (Note: These rates assume use of CXP. These rates exceed the capability of Gigabit Ethernet.)
Subwindow Mode	Full, 1/2 or 1/4 Window
Dynamic Range	14-bit
Digital Data Protocol	Gigabit Ethernet (GigE Vision 2.0), USB3 (USB3 Vision), CoaXPRESS
HD Video	HD-SDI
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)
Optics	
Camera f/#	f/4.0
Available Lenses	17mm, 25 mm, 50 mm, 100 mm
Close-up Lenses / Microscopes	1x, 4x
Focus	Manual
Filtering	Behind the Lens
Image Presentation	
Palettes	Selectable 8-bit
AGC	Linear, PE, 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 40,000 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	TBD
Size (L x W x H) w/o Lens	TBD
Mounting	2 x 1/4" -20, 1 x 3/8" - 16, 4 x 10/24



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Specifications are subject to change without notice
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