

SC8000 HS Series

High Speed MWIR Megapixel Science-Grade Infrared Cameras

With highly sensitive cooled InSb detectors, superb resolution, and all of the cutting edge functionality scientists and researchers have come to expect from FLIR, the SC8000 HD Series brings science and R&D thermography to a whole new level.

Crisp, Clear Images – True megapixel infrared imagery.

Optimized Imaging – Four active preset operating modes provide adjustable integration times, embedded non-uniformity correction, bad pixel replacement, and window size adjustments.

High-Speed Data – 16-channel readout provides digital data at 200 megapixels per second for extreme imaging flexibility and data capture.

Fast Frame Rates – Lightning fast frame rates from full-frame resolution 14-bit data at 128 fps to 64 x 64 at 2,530 fps.

Windowing Flexibility – FPA windowing for faster frame rates and focused analysis.

Frame Time-Stamping – IRIG-B timing built directly into camera for on-board deterministic time stamping.

Interface Flexibility – Multiple simultaneous digital outputs include industry-standard CameraLink, Gigabit Ethernet, and HD-SDI.

HD Video – Broadcast standard HD-SDI interface.

ResearchIR Software – Powerful ResearchIR software for data acquisition, analysis, and reporting; an optional SDK is also available.

Built-In NUC – On-camera Non-Uniformity Corrections.

On-Camera Cal – On-camera radiance and thermographic calibration.



Helicopter in flight



Aerial image



Human physiology

Imaging Specifications

Detector	SC8200	SC8300
Detector Type	Indium Antimonide (InSb)	
Spectral Range	3.0 – 5.0 μm or 1.5 – 5.0 μm	
Resolution	1,024 x 1,024	1,344 x 784
Detector Pitch	18 μm	14 μm
NETD	<25 mK	
Well Capacity	12.1 M electrons	5.9 M electrons
Operability	>99.5% (>99.9% typical)	
Sensor Cooling	Closed Cycle Linear	
Electronics / Imaging		
Readout	Snapshot (FLIR 16 Channel)	
Readout Modes	Asynchronous Integrate While Read; Asynchronous Integrate Then Read	
Synchronization Modes	Genlock; IRIG-B; Sync In, Sync Out	
Image Time Stamp	Internal IRIG-B Decoder Clock / TSPi Accurate Time Stamp	
Integration Time	500 ns to Full Frame	
Frame Rate (Full Window)	132 Hz	
Subwindow Mode	User-Defined	
Dynamic Range	14-bit	
Digital Data Streaming	Simultaneous Gigabit Ethernet and Camera Link Full	
Analog Video	NTSC, PAL, S-Video, SVGA	
HD Video	HD-SDI	
Command and Control	Gigabit Ethernet, USB, RS-232, Camera Link Full	
Measurement		
Standard Temperature Range	-20°C to 500°C (-4°F to 932°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	
Optics		
Camera f/#	f/4.0	
Available Lenses	17 mm, 25 mm, 50 mm, 100 mm, 1000 mm TFOV (50 / 250 / 500 mm) Continuous Zoom (50 / 500 mm)	
Focus	Manual (Motorized & Tactile – Lens Dependant)	
Filtering	Behind-the-Lens	
Image Presentation		
Analog Palettes	Selectable 8-bit	
Automatic Gain Control	Manual, Linear, Plateau Equalization, ROI, DDE	
Analog Overlay	Customizable (IRIG-B, Date, Integration Time, Internal Temp, Frame Rate, Sync Mode, Cooler Hours)	
Zoom	1-4x , Digital Zoom, Panning	
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 ½ Sine Pulse / 4.3 g RMS Random Vibration, All 3 Axis	
Power	24 VDC	
Weight w/o Lens	4.5 kg (10 lb)	
Size (L x W x H) w/o Lens	218 x 143 x 158 mm (8.6 x 5.64 x 6.21 in)	
Mounting	2 x ¼"-20, 1 x 3/8"- 16, 4 x 10/24	

SC8000 Packages

SC8200 or SC8300 Camera Plus: 50 mm Lens, Extender Rings, Temperature Calibration, Multi-IT, Triggering, IRIG-B, ResearchIR Max Software

*Ask your FLIR representative about additional packages



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