



FLIR RS8300

High-Speed MWIR Megapixel Infrared Cameras for Range Applications

The RS8300 is a multi-application long range infrared camera system designed for range tracking, target signature, research, and science applications. The RS8300 camera is a rugged, high performance, full-featured radiometric instrument that can survive harsh range environments.

CRISP, CLEAR IMAGES

Stunning, 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

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 125 fps to 64 x 64 at 2 kHz.

WINDOWING FLEXIBILITY

FPA windowing for faster frame rates and focused analysis.

FRAME TIMESTAMPING

IRIG-B timing built directly into camera for on-board deterministic timestamping of every frame of data.

CONTINUOUS METRIC ZOOM

Provides a 10X continuous optical zoom from 120 - 1200mm. The RS8300 Metric Zoom provides IRIG synchronized, TSPI-accurate timestamping of lens focal length and focus position data right in the image header along with IRIG-B. Optics have active athermalization.

RANGE-RUGGED

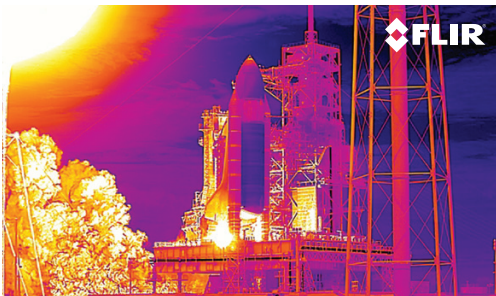
A high durability lens coating is standard, and the enclosure is sealed and supports a positive-pressure gas purge.

POWERFUL SOFTWARE & SDK

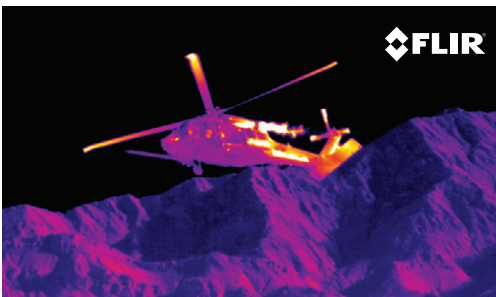
With the included ResearchIR Max software, you can view, acquire, analyze, and share high-speed data from the camera. Alternately, using FLIR's SDK, you can command & control the camera with your own custom software.

SMPTE STANDARD HD VIDEO

HD-SDI supports both 720p and 1080p modes.



Space shuttle launch



Blackhawk Helicopter



FA/18 Super Hornets

Imaging Specifications

System Overview	FLIR RS8300
Detector Type	Indium Antimonide (InSb)
Spectral Range	3.0 – 5.0 μm
Resolution	1,344 x 784
Detector Pitch	14 μm
NETD	<25 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	Genlock; IRIG-B; Sync In, Sync Out, Trigger In
Image Time Stamp	
Integration Time	500 ns to Full Frame
Frame Rate (Full Window)	125 Hz
Subwindow Mode	User-Defined
Dynamic Range	14-bit
Digital Data Protocol	Simultaneous Gigabit Ethernet and CoaXpress (Optional CameraLink Full over Fiber)
HD Video	(720p, 50/59/60 Hz, SMPTE 296M) (1080p, 25/29/30 Hz, SMPTE 274M)
Command & Control	Gigabit Ethernet, RS-232 Serial, CoaXpress (Optional CameraLink Full over Fiber)
Optics	
Camera f/#	f/5
Available Lenses	120-1200 mm (10x) Continuous Metric Zoom 8.97 deg HFOV @ 120 mm, 0.9 deg HFOV @ 1200 mm
Focus	Motorized with autofocus and active athermalization
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 Axes
Power	24 VDC
Weight	34.926 kg (77 lb)
Size (L x W x H) Sunshield On	(927 x 315 x 290 mm) (36.5 x 12.4 x 11.4 in)
Mounting	9 x ¼" -20

Back Panel



Multiple port configurations allow for maximum flexibility when it comes to connectivity.

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