

FLIR RS6700

Range & scientific infrared camera



The RS6700 is a multi-application long range infrared camera system designed for range tracking, target signature, research, and science applications. RS6700 cameras are rugged, high performance, full-featured radiometric instruments that can survive the harshest of environments.

LONG-RANGE IMAGING

Three dual FOV optical configurations and fast auto-focus allows the rapid capture of targets at extreme distances in darkness and low visibility conditions. The highly sensitive FLIR Indium Antimonide (InSb) detector produces crisp thermal images of 640 x 512 pixels highlighting the smallest temperature variations.

HIGH SPEED THERMAL IMAGING

FLIR RS6700 Series offers adjustable frame rates from 0.0015 Hz to the maximum frame rate; high speed 50 Megapixel clock streams 14-bit digital data at 125 Hz full frame. It supports FPA windowing for even higher frame rates and focused analysis.

IMAGE TRIGGERING AND TIME STAMPING

Advanced sync and trigger features allow user to choose from internal clock, external BNC input, IRIG time, or software trigger. IRIG-B timing is built directly into camera for on-board deterministic time-stamping of each frame and advanced triggering options.

INTERFACE FLEXIBILITY

Multiple independent video outputs include industry-standard Camera Link™, Gigabit Ethernet and composite video (NTSC or PAL).

ELECTRONIC IMAGE ENHANCEMENT

The FLIR RS6700 Series comes standard with an integrated Digital Detail Enhancement (DDE) video algorithm for improved target detection.

SOFTWARE

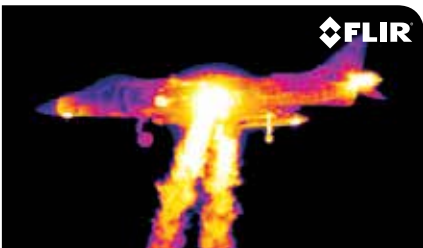
FLIR RS6700 cameras works seamlessly together with FLIR ResearchIR Max software enabling intuitive viewing, recording and advanced processing of the thermal data provided by the camera. A Software Developers Kit (SDK) is optionally available.

MATHWORKS® MATLAB

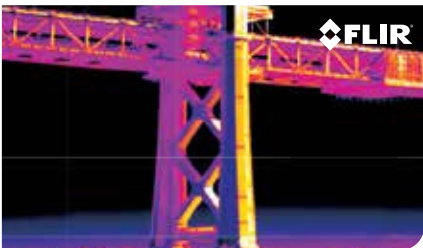
Capture data directly into MathWorks® MATLAB software for advanced image analysis and processing.

KEY FEATURES

- FLIR BUILT SENSOR AND CRYO COOLER
- RUGGED SEALED SYSTEM
- THREE DUAL FOV CONFIGURATIONS
- DDE IMAGE ENHANCEMENT
- CO₂ NOTCH FILTER OPTION



Harrier jet

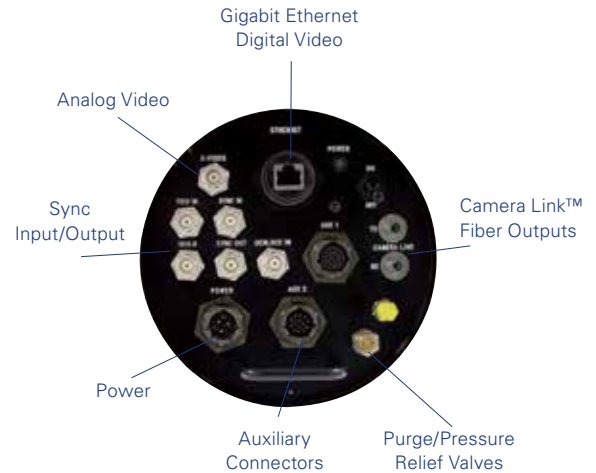


San Francisco Bay bridge support



Imaging Specifications

System Overview		FLIR RS6700	
Detector Type	FLIR Indium Antimonide (InSb)		
Spectral Range	3.0 – 5.0 μm		
Resolution	640 \times 512		
Detector Pitch	15 μm		
NETD	< 25 mK (21 mK Typical)		
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	Genlock; IRIG-B; Sync In, Sync Out		
Image Time Stamp	Internal IRIG-B Decoder Clock / TSP1 Accurate Time Stamp		
Integration Time	480 ns to 687 sec		
Frame Rate (Full Window)	Programmable 0.0015 Hz to 126 Hz		
Subwindow Mode	Flexible windowing (steps of 16 columns, 4 rows)		
Max Frame Rate (@ Min Window)	4.175 kHz (16 \times 4)		
Dynamic Range	14-bit		
Digital Data Streaming	Simultaneous Gigabit Ethernet and Camera Link		
Analog Video	NTSC, PAL		
Camera Control	Gigabit Ethernet, USB, RS-232, Camera Link		
Optics			
Camera f/#	f/4.0		
Available Lenses	RS6700: 50/250 mm; 11° \times 8.8° / 2.2° \times 1.8° RS6701: 100/500 mm; 5.5° \times 4.4° / 1.1° \times 0.9° RS6702: 150/750 mm; 3.7° \times 2.9° / 0.7° \times 0.6°		
Focus	Automatic or Manual (Motorized)		
Analog Video			
Palettes	Selectable 8-bit		
AGC	Manual, Linear, Plateau Equalization, ROI, DDE		
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 -32°C to 55°C (-25.6°F to 131°F)		
Storage Temperature	Range -46°C to 71°C (-50.8°F to 159.8°F)		
Altitude	0 to 40,000 Feet Operational; 0 to 70,000 Feet Non-operational		
Encapsulation	IP67		
Shock / Vibration	40 g, 11 ms ½ Sine Pulse / 4.3 g RMS Random Vibration, All 3 Axis		
Power	24 VDC		
Weight	RS6700: 11.3 kg (25.0 lb) RS6701: 11.6 kg (25.5 lb) RS6702: 14.1 kg (31.0 lb)		
Size (L \times D)	RS6700: 558.8 \times 228.6 mm (22 \times 9 in) RS6701: 558.8 \times 228.6 mm (22 \times 9 in) RS6702: 609.6 \times 228.6 mm (24 \times 9 in)		
Mounting	5 \times ¼" – 20		



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