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
## Imaging Specifications

### System Overview

<table>
<thead>
<tr>
<th></th>
<th>FLIR RS6700</th>
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</thead>
<tbody>
<tr>
<td>Detector Type</td>
<td>FLIR Indium Antimonide (InSb)</td>
</tr>
<tr>
<td>Spectral Range</td>
<td>3.0 – 5.0 μm</td>
</tr>
<tr>
<td>Resolution</td>
<td>640 × 512</td>
</tr>
<tr>
<td>Detector Pitch</td>
<td>15 μm</td>
</tr>
<tr>
<td>NETD</td>
<td>&lt; 25 mK (21 mK Typical)</td>
</tr>
<tr>
<td>Well Capacity</td>
<td>7.2 M electrons</td>
</tr>
<tr>
<td>Operability</td>
<td>&gt;99.8% (&gt;99.95% Typical)</td>
</tr>
<tr>
<td>Sensor Cooling</td>
<td>FLIR Closed Cycle Rotary</td>
</tr>
</tbody>
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### 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 / TSPI Accurate Time Stamp
- **Integration Time:** 480 ns to 687 sec
- **Frame Rate (Full Window):** Programmable 0.0015 Hz to 126 Hz
- **Max Frame Rate (@ Min Window):** 4.175 kHz (16 × 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° × 8.8° / 2.2° × 1.8°
  - RS6701: 100/500 mm; 5.5° × 4.4° / 1.1° × 0.9°
  - RS6702: 150/750 mm; 3.7° × 2.9° / 0.7° × 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:** 1-4×, Digital Zoom, Panning

### General

- **Operating Temperature:** -32°C to 55°C (-25.6°F to 131°F)
- **Storage Temperature:** -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 × D):**
  - RS6700: 558.8 × 228.6 mm (22 × 9 in)
  - RS6701: 558.8 × 228.6 mm (22 × 9 in)
  - RS6702: 609.6 × 228.6 mm (24 × 9 in)
- **Mounting:** 5 × ¼“ – 20