FLIR A6750sc MWIR
Thermal imaging camera with FLIR cooled InSb detector

HIGH SENSITIVITY, CRISP THERMAL IMAGES
FLIR A6750sc incorporates a cooled FLIR Indium Antimonide (InSb) detector that operates in the 3- to 5-micron waveband. Optionally, a broadband version that operates in the 1-5 micron waveband is available. Both versions produce crisp thermal images of 640 x 512. Achieving a high thermal sensitivity of <20 mK, FLIR A6700sc is able to capture the finest image details.

FAST INTEGRATION TIMES
Working in snapshot mode, the FLIR A6750sc is able to capture all pixels from a scene simultaneously in under 190µs for room temperature scenes. This is particularly important when monitoring fast moving objects where an uncooled thermal imaging camera would suffer from image blur. The camera supports image frame rates up to 4.1k frames per second when operating in windowing mode.

STANDARD VIDEO INTERFACES
Using a standard GigE Vision® interface to transmit full dynamic range digital video, and GenICam for camera control, the FLIR A6750sc is a true “plug and play” thermal imaging camera. Additional interfaces include a BNC analog video output. The Gigabit Ethernet and analog video are simultaneously active yet independently controlled allowing greater flexibility for recording and display purposes.

CUSTOM COLD FILTERS AVAILABLE
Custom cold filtering options for specific spectral detection and measurement are available. Perfect for imaging through glass, measuring temperature of thin film plastics, laser profiling and detection, or optical gas imaging.

SOFTWARE
FLIR A6750sc camera works seamlessly 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.

COMPATIBLE WITH 3RD PARTY SOFTWARE
Control the A6750sc and capture data directly into MathWorks® MATLAB software for custom image analysis and enhancement.

KEY FEATURES
- FLIR built cryo cooler and insb detector
- Excellent image quality: 640 x 512 pixels
- High sensitivity: <20 mK
- High speed image acquisition: up to 4.1 kHz in windowing mode
- Synchronization with other instruments and events
- Wide choice of optics & extender rings

www.flir.com
## Imaging Specifications

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<tr>
<th><strong>System Overview</strong></th>
<th><strong>FLIR A6750sc MWIR</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Detector Type</td>
<td>FLIR Indium Antimonide (InSb)</td>
</tr>
<tr>
<td>Spectral Range</td>
<td>3 – 5 μm or 1 - 5 μm</td>
</tr>
<tr>
<td>Resolution</td>
<td>640 × 512</td>
</tr>
<tr>
<td>Detector Pitch</td>
<td>15 μm</td>
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<tr>
<td>NETD</td>
<td>&lt;20 mK (18 mK typical)</td>
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<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>
</table>

### Electronics / Imaging

- **Readout**: Snapshot
- **Readout Modes**: Asynchronous Integrate While Read, Asynchronous Integrate Then Read
- **Synchronization Modes**: Sync In, Sync Out, Trigger In
- **Integration Time**: 480 ns to 687 sec
- **Frame Rate (Full Window)**: Programmable 0.0015Hz to 125Hz
- **Subwindow Modes**: User Defined Size, Centered in Image
- **Max Frame Rate (Full Window)**: 4,175Hz (16 x 4)
- **Dynamic Range**: 14-bit
- **Digital Data Protocol**: Gigabit Ethernet (GigE Vision 2.0)
- **Analog Video**: NTSC, PAL
- **Camera Control**: GenICam and RS-232

### 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)
- **Accuracy**: ± 2°C or ±2% of reading

### Optics

- **f/#**: 2.5 to 4.0
- **Available Lenses**: 3-5μm: 13mm, 13mm (low distortion), 25mm, 50mm, 100mm (all lenses are f/2.5) 1-5μm: 25mm, 50mm, 100mm (lenses are f/2.5)
- **Microscopes**: 1x (this lens is f/4 and requires an f/4 camera)
- **Focus**: Manual
- **Filtering**: Removable Behind the Lens or Permanent “cold” Filter Available

### Analog Video

- **Analog Palettes**: Selectable 8-bit
- **ACC**: Manual, Linear, Plateau Equalization, DDE
- **Digital Zoom**: Video Zoom is Auto Selected: 1x for Full and 1/2 window, 2x for 1/4 window

### 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 10,000 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 (< 50 W steady state)
- **Weight w/o Lens**: 5 / 2.3 kg
- **Size (L x W x H w/o Lens)**: 8.5 x 4.0 x 4.3” / 21.6 x 10.2 x 10.9cm
- **Mounting**: 2 x ¼“-20, 1 x 3/8” – 16, 4 x 10/24