FLIR SC6800
High Speed MWIR
Science-Grade Infrared Camera

The High Speed FLIR SC6800 offers high speed and high resolution with ease and flexibility in configuration for just about any scientific or research application.

**Interface Flexibility** – Multiple simultaneous analog and digital outputs including component video, HD-SDI, Camera Link Full, or CoaxPress.

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

**Triggering Control** – Advanced triggering options through external BNC input, IRIG time, or a software trigger; clock out single images, multiple images, or multiple images from multiple presets.

**Ultra Fast Frame Rate** – Features fast frame rates with a high speed 200 megapixel clock that streams 14-bit digital data up to 565 Hz at full resolution.

**Windowing Flexibility** – Supports FPA windowing for faster frame rates.

**Frame Optimization** – Output frame rate adjustable from 0.0015 Hz to the maximum frame rate at a given window size and integration time with 0.1 Hz resolution.

**Frame Time-Stamping** – IRIG-B timing built directly into camera for on-board deterministic time-stamping of each frame and advanced triggering options.

**ResearchIR Software** – Compatible with FLIR ResearchIR for data acquisition, analysis, and reporting; optional SDK.

**On-Camera Cal** – On-camera Radiance and Thermographic Calibration.
### Imaging Specifications

<table>
<thead>
<tr>
<th>Detector</th>
<th>SC6800</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detector Type</td>
<td>Indium Antimonide (InSb)</td>
</tr>
<tr>
<td>Spectral Range</td>
<td>3.0 – 5.0 µm or 1.5 – 5.0 µm</td>
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<tr>
<td>Resolution</td>
<td>640 x 512</td>
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<tr>
<td>Detector Pitch</td>
<td>25 µm</td>
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<tr>
<td>NETD</td>
<td>&lt;20 mK (19 mK typical)</td>
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<tr>
<td>Well Capacity</td>
<td>11.0 M electrons</td>
</tr>
<tr>
<td>Operability</td>
<td>&gt;99.8% (&gt;99.95% typical)</td>
</tr>
<tr>
<td>Sensor Cooling</td>
<td>Closed Cycle Rotary</td>
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</table>

### 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 0.0016 Hz to 565 Hz
- **Subwindow Mode**: User-Defined
- **Max Frame Rate (8 Min Window)**: 16,404 Hz @ 640 x 4
- **Dynamic Range**: 14-bit
- **Digital Data Streaming**: Simultaneous Gigabit Ethernet and Camera Link or CoaxPress (CXP), HD-SDI

### Analog Video

- NTSC, PAL, S-Video, SVGA Component Video

### Command & Control

- Gigabit Ethernet, USB, RS-232, Camera Link or CXP

### 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

- **Camera f/#**: 2.5 or 4.1
- **Available Lenses**: 25 mm, 50 mm, 100 mm, 1000 mm
- **Continuous Zoom (50 / 500 mm)**: also 200 mm, 350 mm [both f/4]
- **Close-up Lenses / Microscopes**: 1x, 2.5x, 4x, 5x (5x requires f/4.1)
- **Focus**: Manual (Motorized & Tactile – Lens-Dependent)
- **Filtering**: Behind-the-Lens

### Image Presentation

- **Analog Palettes**: Selectable B-bit
- **AGC**: Manual, Linear, Plateau Equalization, ROI, DDE
- **Analog Overlay**: Customizable (IRG-B, Date, Integration Time, Internal Temp, Frame Rate, Sync Mode, Cooler Hours)
- **Zoom**: 1-4x Digital with Pan

### 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 sine pulse / 4.3 g RMS Random Vibration, All 3 Axis
- **Power**: 24 VDC (< 50 W steady state)
- **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 5.6 x 6.21 in)
- **Mounting**: 2 x ¼”-20, 1 x 3/8”-16, 4 x 10/24

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