The FLIR X6800 is a fast, highly sensitive MWIR camera designed for scientists, researchers, and engineers. With advanced triggering and on camera RAM/SSD recording, this camera offers the functionality to stop motion on high-speed events both in the lab and at the test range.

**HIGH-SPEED MWIR SCIENCE-GRADE CAMERA**

**FLIR X6800™**

The FLIR X6800 is a fast, highly sensitive MWIR camera designed for scientists, researchers, and engineers. With advanced triggering and on camera RAM/SSD recording, this camera offers the functionality to stop motion on high-speed events both in the lab and at the test range.

www.flir.com/science

**HIGH SPEED, HIGH SENSITIVITY**
Record crisp thermal images, even at high speeds

- Capture full 640 x 512 pixel resolution data at 520 Hz
- Achieve frame rates up to 23,076 Hz in subwindow mode
- Detect temperature differences down to <20 mK with very low noise

**ON-CAMERA RAM/SSD RECORDING**
Stop motion on high-speed events, both in the lab and at the test range

- Save up to 51 seconds of full-resolution data to on-camera RAM with zero dropped frames
- Play back from RAM or save to removable solid-state drive in 90-seconds, so you can quickly rearm for a new recording
- Stream high-speed 14-bit data simultaneously over Gigabit Ethernet and CameraLink
- Capture full 640 x 512 pixel resolution data at 520 Hz
- Achieve frame rates up to 23,076 Hz in subwindow mode
- Detect temperature differences down to <20 mK with very low noise

**SYNCHRONIZATION, TRIGGERING, AND SOFTWARE**
Capture every moment by synchronizing with external events or instrumentation

- Triggers with external BNC input, a software trigger, or an IRIG-B time stamp for maximum versatility
- Integrates seamlessly with FLIR ResearchIR Max or third-party software such as MathWorks® MATLAB
- Stream data directly to a PC running software for live viewing, recording, analysis, and sharing
- Integrate with your proprietary software through optional Software Developers Kit (SDK)
### Specifications

<table>
<thead>
<tr>
<th>Field</th>
<th>FLIR X6800 MWIR</th>
</tr>
</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 or 1.5 – 5.0 μm</td>
</tr>
<tr>
<td>Resolution</td>
<td>640 x 512</td>
</tr>
<tr>
<td>Detector Pitch</td>
<td>25 μm</td>
</tr>
<tr>
<td>Thermal Sensitivity/NETD</td>
<td>&lt;20 mK</td>
</tr>
<tr>
<td>Well Capacity</td>
<td>11.0 M electrons</td>
</tr>
<tr>
<td>Operability</td>
<td>&gt;99.8% (&gt;99.9% typical)</td>
</tr>
<tr>
<td>Sensor Cooling</td>
<td>Closed cycle rotary</td>
</tr>
</tbody>
</table>

#### Electronics

- **Readout Type**: Snapshot
- **Synchronization Modes**: Genlock, Sync-in, Sync-out
- **Image Time Stamp**: Internal IRIG-B decoder clock TSI accurate time stamp
- **Minimum Integration Time**: 270 ns
- **Pixel Clock**: 355 MHz
- **Frame Rate (Full Window)**: Programmable; 0.0015 Hz to 520 Hz
- **Subwindow Mode**: Flexible windowing down to 32 x 4 (steps of 32 columns, 4 rows)
- **Dynamic Range**: 14-bit
- **On-Camera Image Storage**: RAM (volatile): 16 GB, up to 28,000 frames, full frame, SSD (non-volatile): 512 GB (supports >4 TB)
- **Radiometric Data Streaming**: SSD (non-volatile): 512 GB (supports >4 TB)
- **Standard Video**: HDMI, SDI, NTSC, PAL
- **Command and Control**: GigE, USB, RS-232, and Camera Link (GenICam protocol supported over GigE)

#### Temperature Measurement

- **Standard Temperature Range**: -20°C to 350°C (-4°F to 662°F)
- **Optional Temperature Range**: Up to 3,000°C (5,432°F)
- **Accuracy**: ±1°C or ±1% of reading (0°C to 3,000°C on standard lens configurations only)

#### Optics

- **Camera f/Number**: f/2.5 or f/4.1
- **Available Lenses** (Uses FLIR HDC Optics):
  - 3-5 μm: 17 mm, 25 mm, 50 mm, 100 mm, 200 mm Broadband (1-5 μm): 25 mm, 50 mm, 100 mm

Specifications are subject to change without notice. For the most up-to-date specs, go to www.flir.com