FLIR A400, A500, and A700 thermal cameras, when configured for Smart Sensor capabilities, offer advanced thermal imaging paired with edge computing and industrial internet of things (IIoT) for simplified inclusion in new or existing networks. With multiple field-of-view choices, motorized focus control, and unrivaled network connectivity, these automation cameras can tackle the most complex remote monitoring, alarming, and analytics objectives. Automation system solution providers get a running start with a camera that is easy to add, configure, and operate in HMI/SCADA systems. FLIR Axxx-Series cameras can be used for a wide range of applications, including screening for elevated skin temperature as an adjunct to other body temperature screening tools, monitoring critical infrastructure, assessing product quality, or detecting potential signs of heat build-up.

www.flir.com/Axxx-Series-Smart-Sensor

**THERMAL SMART SENSOR CAMERA**

**FLIR Axxx™-Series**

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**FLEXIBILITY FOR EASIER INTEGRATION**

Unrivaled network connectivity and built-in computing options

- Superior connectivity* through features such as Wi-Fi†, Modbus TCP, and EtherNet/IP— all of which simplify integration into HMI/SCADA systems
- Prepares for digitalization through MQTT protocol
- Integrates easily into web services with the REST API over XML or JSON

**FLIR INNOVATIONS FOR SMARTER RESULTS**

Tailor thermal imaging monitoring for any site’s unique requirements

- Improves definition of areas of interest and object analysis with the polygon line function*
- Includes options to adjust temperature measurements and alarms based on a reference temperature source*
- Superior I/O control via Modbus TCP Master* enables integration with industrial automation systems using analog and digital control
- Compressed radiometric streaming* cuts bandwidth by 90%, making it possible to connect cameras and share data via Wi-Fi†

**WORLD-CLASS THERMAL IMAGING CAPABILITIES**

Designed with the features to deliver consistent, accurate results

- Provides superior image quality with up to 640 × 480 (307,200) thermal pixel resolution‡
- Offers a high measurement accuracy of ±2°C
- Improves temperature accuracy for objects near and far with precision motorized focus
- Increases contrast in even-temperature scenes and enhances edge detail in low light using FSX® (Flexible Scene Enhancement)* technology
**SPECIFICATIONS**

### Image and Optical Data

<table>
<thead>
<tr>
<th></th>
<th>Standard Configuration</th>
<th>Advanced Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR resolution</td>
<td>320 × 240 (A400), 464 × 348 (A500), or 640 × 480 (A700)</td>
<td>1280 × 960</td>
</tr>
<tr>
<td>Visual resolution*</td>
<td>1280 × 960</td>
<td></td>
</tr>
<tr>
<td>Thermal resolution</td>
<td>&lt;30 mK to &lt;50 mK, lens dependent</td>
<td></td>
</tr>
<tr>
<td>Lenses</td>
<td>14°, 24°, and 42°</td>
<td></td>
</tr>
<tr>
<td>IR Camera Focus</td>
<td>One-shot contrast, motorized, manual</td>
<td></td>
</tr>
</tbody>
</table>

### Measurement

<table>
<thead>
<tr>
<th></th>
<th>Standard Configuration</th>
<th>Advanced Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object temperatures</td>
<td>-20°C to 2000°C (-4°F to 3632°F), 3 ranges</td>
<td></td>
</tr>
<tr>
<td>Accuracy</td>
<td>±2°C (±3.6°F) or ±2% of reading</td>
<td></td>
</tr>
</tbody>
</table>

### Measurement analysis

<table>
<thead>
<tr>
<th>Standard functions</th>
<th>10 spotmeters, 10 boxes, 3 Deltas, 1 isotherm, 1 iso-coverage, 1 reference temperature</th>
<th>10 spotmeters, 10 boxes &amp; mask polygons, 3 Deltas, 2 isotherm, 2 iso-coverage, 1 reference temperature, 2 lines, 1 polyline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic hot/cold detection</td>
<td>Max./min. temperature value and position shown within box</td>
<td></td>
</tr>
<tr>
<td>Scheduled response</td>
<td>SFTP (image), SMTP (image and/or measurement data/result)</td>
<td></td>
</tr>
<tr>
<td>Measurement result read-out</td>
<td>Yes; common protocols include EtherNet/IP, Modbus TCP, MQTT, and REST API</td>
<td></td>
</tr>
</tbody>
</table>

### Alarm

- **Alarm function:** On any selected measurement function; digital in; internal camera temperature
- **Alarm output:** Yes; common output includes e-mail, EtherNet/IP, Modbus TCP, and RESTful API

### Video streaming, RTSP protocol

- **Video stream 1**
  - **Source:** Visual
  - **Overlay:** No
  - **Pixel format:** YUV411
  - **Encoding:** H.264/MPEG4/MJPG

- **Video stream 2**
  - **Source:** Visual, IR, MSX®
  - **Overlay:** With, without
  - **Pixel format:** YUV411
  - **Encoding:** H.264/MPEG4/MJPG

- **Ethernet**
  - **Interface:** Wired; Wi-Fi*  
  - **Connector types:** M12 8-pin X-coded, female; RP-SMA, female  
  - **Ethernet type & standard:** 1000 Mbps, IEEE 802.3  
  - **Ethernet power:** Power over Ethernet, PoE IEEE 802.3af class 3  
  - **Ethernet protocols:** Include EtherNet/IP, Modbus TCP, and MQTT  

- **Digital input/output**
  - **Connector type:** M12 Male 12-pin X-coded (shared with ext. power)  
  - **Digital input:** 2× opto-isolated, Vin (low) = 0-1.5 V, Vin (high) = 3-25 V  
  - **Digital output:** 3× opto-isolated, 0–48 V DC, max. 350 mA (derated to 200 mA at 60°C). Solid-state opto relay, 1× dedicated as fault output (NC)  

- **Power system**
  - **Connector type:** M12 Male 12-pin A-coded (shared with Digital I/O)  
  - **Power consumption:** 7.5 W at 24 V DC typical; 7.8 W at 48 V DC typical; 8.1 W at 48 V PoE typical  

### Wi-Fi*

- **Connector type:** Female RP-SMA  

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The FLIR A-Series cameras are designed for configuration to your specific needs. To learn more about the Smart Sensor Configuration options, please visit: flir.com/axxx-series

*Optional feature