

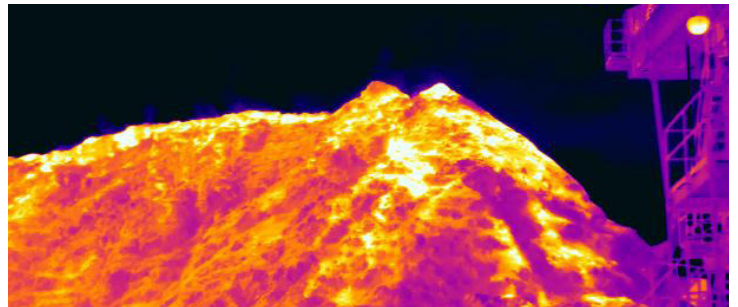
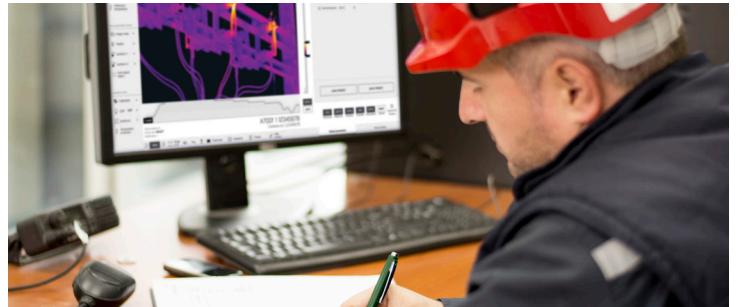


## FLIR A500f/A700f

Fixed Mount Thermal Imaging Camera for Condition Monitoring and Early Fire Detection



FLIR A500f and A700f Advanced Smart Sensor Thermal Cameras are ideal for users who want built-in temperature analytics and alarms for outdoor condition monitoring and early fire detection applications. These cameras feature a protective housing that can withstand temperatures between -30°C to 50°C, which provides a high level of protection against challenging environmental conditions and secures the sensor from theft. FLIR A500f/A700f cameras offer high-resolution thermal imaging paired with edge computing and industrial internet of things (IIoT) for simplified inclusion in new or existing networks. For VMS integrations, thermal and visible streams can be viewed independently or simultaneously. The cameras are easy to add, set up, and operate in HMI/SCADA systems, offering automation system solution providers a running start. FLIR A500f/A700f cameras can help companies protect assets, improve safety, maximize uptime, and minimize maintenance costs.



### SIMPLIFY INTEGRATION

FLIR A500f/A700f cameras provide communication and control options that allow easy integration into existing monitoring systems

- HMI/SCADA-compatible using Modbus TCP client & server and Ethernet/IP
- ONVIF S compliant and integrates into standard security VMS and NVR solutions including control of pan/tilts
- Ready for the fourth industrial revolution, with support for widely adopted IIoT protocols such as MQTT and REST API, in both XML and JSON format

### BEST-IN-CLASS OPERATIONAL FEATURES

Tailor thermal imaging monitoring to meet any site's unique requirements

- Improve definition of areas of interest or object curvatures using polygon, polyline, and line function
- Integrate into industrial automation systems using analog and digital control thanks to superior I/O control via Modbus TCP Client and Server, Ethernet IP, REST API, and MQTT
- Conserve network bandwidth with compressed radiometric streaming to FLIR Atlas SDK polarized glasses

### UNMATCHED THERMAL IMAGING

Deliver consistent, accurate results in harsh conditions

- Provides superior image quality with up to 640 × 480 (307,200 pixels) thermal resolution
- Increase contrast in even-temperature scenes and enhance edge detail in low light using FSX® (Flexible Scene Enhancement) technology
- Ensure temperature accuracy of objects at different distances using remote motor focus via Ethernet communication

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## SPECIFICATIONS

| System Overview                  |                                                                                                                                                                                                                                                        | A500f | A700f                                                                                            |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------|
| IR Resolution                    | 464 × 348 (161,472 pixels)                                                                                                                                                                                                                             |       | 640 × 480 (307,200 pixels)                                                                       |
| Visual Resolution                | 1280 × 960 (not applicable for 80° version)                                                                                                                                                                                                            |       |                                                                                                  |
| Detector Pitch                   | 17 μm                                                                                                                                                                                                                                                  |       | 12 μm                                                                                            |
| MSX® & FSX®                      | Yes (MSX is not available for 80° version)                                                                                                                                                                                                             |       |                                                                                                  |
| Available Field of Views         | 14°, 24°, 42°, 80, 14°, 24°, 42°, 80°, FlexView® dual FOV (24°/14°), FlexView® dual FOV (42°/24°) lenses                                                                                                                                               |       |                                                                                                  |
| Focal Plane Array [FPA]          | Uncooled microbolometer                                                                                                                                                                                                                                |       |                                                                                                  |
| Focus                            | Motorized focus, manual & on-command automatic (scene contrast method)                                                                                                                                                                                 |       |                                                                                                  |
| Image Frequency                  | 30 Hz                                                                                                                                                                                                                                                  |       |                                                                                                  |
| Image Storage                    | Records up to 100 FLIR radiometric JPEG; storage as function of: alarm, scheduling, or user interaction (camera web)                                                                                                                                   |       |                                                                                                  |
| Measurement                      |                                                                                                                                                                                                                                                        |       |                                                                                                  |
| Object Temperature Range         | -20°C to 120°C (-4°F to 248°F), 0°C to 650°C (32°F to 1202°F), 300°C to 1500°C (572°F to 2732°F)                                                                                                                                                       |       | -20°C to 120°C (-4°F to 248°F), 0°C to 650°C (32°F to 1202°F), 300°C to 2000°C (572°F to 3632°F) |
| Accuracy                         | ±2°C (±3.6°F) or ±2% of reading, for ambient temperature 15°C-35°C (59°F-95°F) and object temperature above 0°C (32°F)                                                                                                                                 |       |                                                                                                  |
| Readout                          | Measurement results:<br>Ethernet/IP, Modbus TCP server (pull), Modbus TCP client (push), MQTT (push), REST API (GET/POST), measurements and still image (radiometric JPEG, visual 640 × 480, visual 1280 × 960), web interface                         |       |                                                                                                  |
| Automatic Hot and Cold Detection | Max/min temperature value and position shown within box, polygon, line or polyline                                                                                                                                                                     |       |                                                                                                  |
| Measurement Presets              | Yes                                                                                                                                                                                                                                                    |       |                                                                                                  |
| Measurement Tools                | 10 spotmeters, 10 boxes or mask polygons, 3 Deltas (difference any value/reference/external lock), 2 isotherms (above/below/interval), 2 iso-coverage, 1 reference temperature, 2 lines, 1 polyline, Maximum 12 measurement functions at the same time |       |                                                                                                  |
| Web Interface                    | Yes                                                                                                                                                                                                                                                    |       |                                                                                                  |
| Multi Streaming                  | Yes                                                                                                                                                                                                                                                    |       |                                                                                                  |
| Alarm                            |                                                                                                                                                                                                                                                        |       |                                                                                                  |
| Alarm Functions                  | On any selected measurement function, digital in, and internal camera temperature                                                                                                                                                                      |       |                                                                                                  |
| Alarm Output                     | Digital out, e-mail (SMTP) (push), Ethernet/IP, file transfer (FTP) (push), Modbus TCP server (pull), MQTT (push), query over RESTful API (pull), store image or video                                                                                 |       |                                                                                                  |
| Encoding                         | Video stream: H.264, MPEG4, or MJPEG<br>Radiometric stream: Compressed JPEG-LS over RTSP                                                                                                                                                               |       |                                                                                                  |

| Digital Input/Output          |                                                                                                                                                                                                                                                  |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Digital I/O Connector Type    | Terminal block inside housing                                                                                                                                                                                                                    |
| Digital I/O Isolation Voltage | 500 VRMS                                                                                                                                                                                                                                         |
| Digital Input Purpose         | NUC, NUC disable, alarm                                                                                                                                                                                                                          |
| Digital Inputs                | 2x opto-isolated, Vin(low)= 0–1.5 V, Vin(high)= 3–25 V                                                                                                                                                                                           |
| Digital Output Purpose        | As a function of alarm, output to external device, Fault (NC)                                                                                                                                                                                    |
| Digital Outputs               | 3x opto-isolated, 0–48 V DC, max. 350 mA; solid-state opto relay; 1x dedicated as Fault output (NC)                                                                                                                                              |
| Cable Glands                  | 1x M12, 1x M16, 1x M20                                                                                                                                                                                                                           |
| Ethernet                      |                                                                                                                                                                                                                                                  |
| Ethernet                      | For control, result, image, and power                                                                                                                                                                                                            |
| Ethernet Communication        | TCP/IP socket-based FLIR proprietary                                                                                                                                                                                                             |
| Ethernet Connector Type       | IP67 rated RJ45 port                                                                                                                                                                                                                             |
| Ethernet Interface            | Wired                                                                                                                                                                                                                                            |
| Ethernet Power                | Power over Ethernet, PoE IEEE 802.3af class 3<br>EtherNet/IP, IEEE 1588, Modbus TCP, MQTT, SNMP, TCP, UDP, SNTP, RTSP, RTP, HTTP, HTTPS, ICMP, IGMP, sftp (server), FTP (client), SMTP, DHCP, MDNS (Bonjour), uPnP, PoE injector sold separately |
| Environmental Data            |                                                                                                                                                                                                                                                  |
| Operating Temperature Range   | -30°C to 50°C (-22°F to 122°F)                                                                                                                                                                                                                   |
| EMC                           | EN50130-4, EN61000-6-3, EN55022 Class B, FCC Part. 15 Class B                                                                                                                                                                                    |
| Encapsulation                 | IP67                                                                                                                                                                                                                                             |
| Physical Data                 |                                                                                                                                                                                                                                                  |
| Packaging Size [L x W x H]    | 62 cm × 20.2 cm × 22 cm (24.41 in × 7.92 in × 8.66 in)                                                                                                                                                                                           |
| Size [L x W x H]              | 51.5 cm × 17.7 cm × 22.9 cm (20.28 in × 6.97 in × 9.02 in)                                                                                                                                                                                       |
| Mounting                      | Sold separately, pole and wall adapters available                                                                                                                                                                                                |
| Housing Material              | Aluminum housing, sunshield in ABS                                                                                                                                                                                                               |
| System Features               |                                                                                                                                                                                                                                                  |
| Heater                        | 8W, electronically controlled, T_ON 20°C ±2°C (68°F ±4°F), T_OFF 23°C ±2°C (73.4°F ±4°F)                                                                                                                                                         |
| ONVIF Conformance             | Yes. ONVIF Profile S                                                                                                                                                                                                                             |
| Window Transmission           | Automatic, based on window temperature                                                                                                                                                                                                           |
| Power Consumption             | 30W PoE, PoE+, Type 2. IEEE 802.3af, IEEE 802.3at/PoE Plus                                                                                                                                                                                       |

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