

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

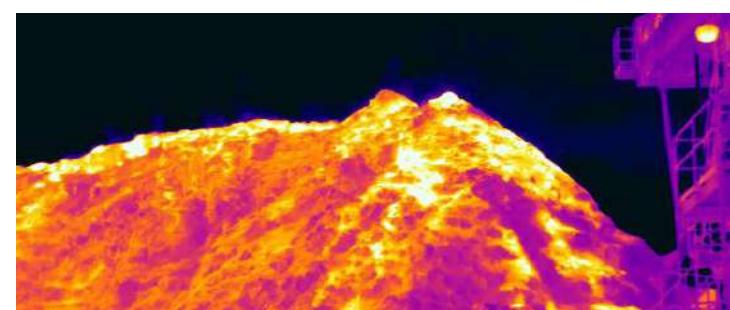
Tailor thermal imaging monitoring to meet any site's unique requirements

- 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 x 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



SPECIFICATIONS

System Overview		A500f	A700f	Digital Input/Output
IR Resolution		464 × 348 (161,472 pixels)	640 × 480 (307,200 pixels)	Digital I_O Connector Type
Visual Resolution		1280 × 960		Terminal block inside housing
Detector Pitch		17 µm	12 µm	Digital I_O Isolation Voltage
MSX® & FSX®		Yes		500 VRMS
Available Field of Views		14°, 24°, 42° athermalized lens		Digital Input Purpose
Focal Plane Array [FPA]		Uncooled microbolometer		NUC, NUC disable, alarm
Focus		Motorized focus, manual & on-command automatic (scene contrast method)		Digital Inputs
Image Frequency		30 Hz		2x opto-isolated, Vin(low)= 0–1.5 V, Vin(high)= 3–25 V
Image Storage		Records up to 100 FLIR radiometric JPEG; storage as function of: alarm, scheduling, or user interaction (camera web)		Digital Output Purpose
Measurement				As a function of alarm, output to external device, Fault (NC)
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)	Digital Outputs
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)		Cable Glands
Readout		Measurement results: 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		Ethernet
Automatic Hot and Cold Detection		Max./min. temperature value and position shown within box		Ethernet
Measurement Presets		Yes		Ethernet Communication
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		Ethernet Connector Type
Web Interface		Yes		Ethernet Interface
Multi Streaming		Yes		Ethernet Power
Alarm				Power over Ethernet, PoE IEEE 802.3af class 3
Alarm Functions		On any selected measurement function, digital in, and internal camera temperature		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
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		Environmental Data
Encoding		Video stream: H.264, MPEG4, or MJPEG Radiometric stream: Compressed JPEG-LS over RTSP		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		

Specifications are subject to change without notice.
For a complete, up-to-date list of specifications, go to flir.com/a500f-a700f



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