

A310F & A310PT

Thermal Cameras for Security
and Safety Monitoring



The next level of security.



Thermal Cameras + Thermal Analytics = Temperature Alarms

Security professionals around the world have been using FLIR thermal cameras for perimeter and critical asset security for years.

Facility Operations and Safety personnel have been using FLIR cameras to gather non-contact temperature measurements and condition monitoring data for decades.

Why not use the same cameras to do both? **Now you can.**

By merging our industry-leading thermal imaging cameras with thermal video analytics and non-contact temperature measurement, the A310 Fixed and Pan/Tilt camera systems create a multi-role solution for perimeter intrusion detection and facility safety monitoring.

With FLIR Analytics you can use your security cameras to measure and display actual object temperatures and generate alarms when thresholds are exceeded, even at remotely monitored facilities.

A310F and PT cameras give you.

- Perimeter security with thermal imaging and analytics
- Equipment monitoring to anticipate unscheduled failures
- Wide-area surveillance for fire detection and monitoring of critical materials
- Alarms based on actual object temperatures exceeding pre-set thresholds

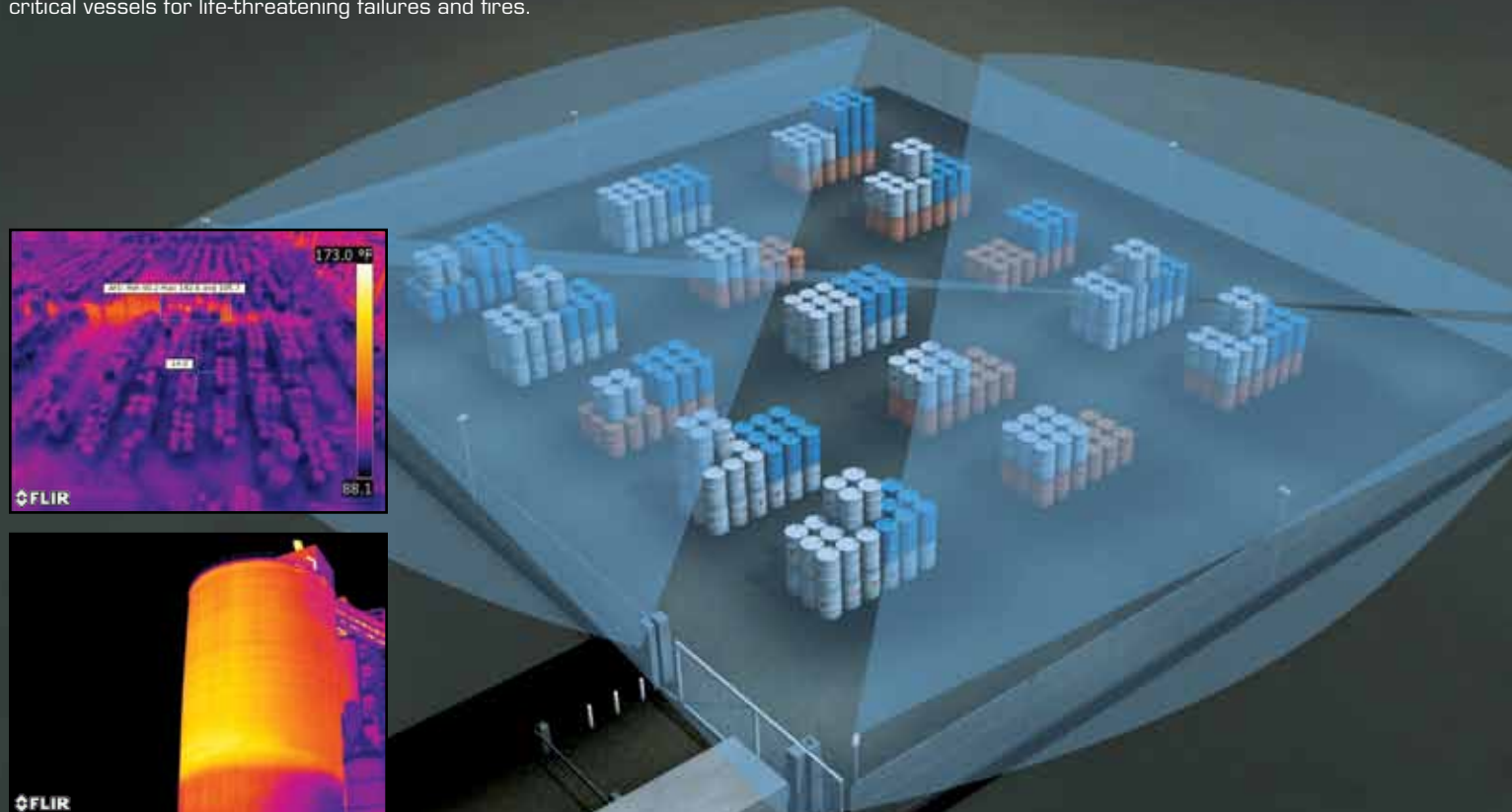


Pole-mounted fixed cameras using FLIR Analytics provide automated alarming of intruders, while cueing pan/tilt cameras to interrogate alarms for more detailed assessment.

When no intrusion alarms are present, the pan/tilt cameras can examine substation components for heat signatures that signify efficiency loss or impending failure and generate temperature alarms. Proactively fixing these faults saves utility companies from losing millions of dollars in revenue due to unplanned service interruptions every year.

These same pan/tilt cameras provide intrusion alarm assessment with built-in analytics and respond to alarms generated by other third-party devices.

Strategically positioned cameras send alarms when a concentrated area shows a temperature increase. This is a proven application for monitoring hazardous chemical storage facilities, bulk coal piles, and critical vessels for life-threatening failures and fires.



Thermal Analytics Applications

Powerful and versatile, A310 cameras with FLIR Thermal Analytics protect you from loss on multiple fronts.

These FLIR Thermal Analytics solutions protect facilities from unwanted intrusion, but also from fire hazards, premature equipment failure, and other factors that can lead to expensive downtime and lost revenue.

Electric power substations, remote and green energy production facilities, CFATS impacted facilities, and many other industrial/commercial enterprises all benefit from these FLIR Thermal Analytics solutions and A310F and PT camera systems.

Go to [FLIR.com/a310](https://www.flir.com/a310) to see a video demonstration!



Specifications

Thermal Camera		A310F	A310PT
Detector Type	Uncooled Microbolometer		
Spectral Range	7.5 – 13.0 μm		
Resolution	320 x 240		
Detector Pitch	25 μm		
NETD	<50 mK		
Frame Rate	30 Hz		
Command & Control	Ethernet/IP, Modbus TCP, TCP, UDP, SNTP, RTSP, RTP, HTTP, ICMP, IGMP, ftp, SMTP, SMB (CIFS), DHCP, MDNS (Bonjour), uPnP		
Measurement			
Standard Temperature Range	-20°C to 120°C (-4°F to 248°F) 0°C to 350°C (32°F to 662°F)		
Accuracy	$\pm 2^\circ\text{C}$ or $\pm 2\%$		
Temperature Measurement Analytics	Spotmeters, Isotherms, Areas		
Emissivity Correction	Variable from 0.01 to 1.0		
Measurement Corrections	Global and individual object parameters		
Optics			
Camera f/#	f/1.3		
Integrated Lens Focal Length	18 mm		
Field of View (FOV) / Minimum Focus Distance	25° x 18.8° / 0.4 m (1.31 ft.) Available as options: 7°/15°/45°/90°		
Focus	Automatic or Manual (Motorized)		
Zoom	1–8x continuous, digital, interpolating zooming on images		
Image Presentation			
Ethernet Video	MPEG-4		
Analog Video	NTSC/PAL		
General			
Weight	~11 lb	~39.5 lb (configuration dependent)	
Input Voltage	10-30 VDC	21-30 VAC, 21-30 VDC	
Power Consumption	25 W (max w/ heaters)	24 VAC: 85 VA (max w/o heaters); 215 VA (max w/ heaters) 24 VDC: 65 W (max w/o heaters); 195 W (max w/ heaters)	
Operating Temperature Range	-15°C to 50°C (5°F to 122°F)	-25°C to 50°C (-13°F to 122°F)	
Storage Temperature Range	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)	
Encapsulation	IP 66 (IEC 60529)	IP 66 (IEC 60529)	
Bump / Vibration	25 g (IEC 60068-2-29) / 2 g (IEC 60068-2-6)	5 g (IEC 60068-2-27) / 2 g (IEC 60068-2-6)	

A310PT Only

Day/Night CCD Camera	
Camera Type	Sony FCB-EX1010
Sensor Type	1/4" Exview HAD CCD
Field of View	57.8° (h) to 1.7° (h)
Focal Length	3.4 mm to 122.4 mm
Zoom	36x Optical zoom, 12x E-zoom
F/#	1.6 to 4.5
Effective Pixels (NTSC)	380,000
Pan-Tilt Control	
Point to Point (stand alone), Ethernet, Network Enabled	Standard
Serial	RS-232/-422; Pelco D, Bosch
Pan-Tilt Performance	
Pan Angle/Speed	Continuous 360°; 0.1° to 60°/sec
Tilt Angle/Speed	45° to -45°; 0.1° to 30°/sec

*Consult installation manual for complete details.



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