



DUAL-SENSOR RADIOMETRIC PAN/TILT

TRITON™ A310 PT

Security professionals around the world use FLIR thermal imaging to secure perimeters and critical assets, while facility operations personnel use the same technology to gather non-contact temperature measurements and condition monitoring data. The FLIR Triton A310 PT Series combines thermal and visible light imaging to offer both advanced perimeter security and automated safety monitoring. Thermal imaging reliably detects body heat and continuous temperature measurements, while the visible camera offers added visual verification and long range viewing.

www.flir.com/thermal-security



PERIMETER SECURITY

Dual thermal and visible payloads with analytics provide best-in-class intrusion detection

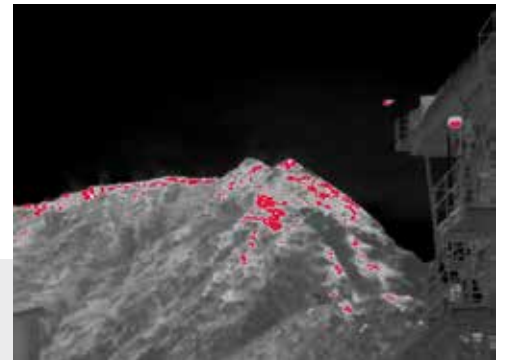
- 320 × 240 thermal resolution and multiple lens options quickly detect objects of interest
- Visible light 36x continuous optical zoom offers long-range imaging
- Pan/tilt capabilities allow tracking of moving targets



EQUIPMENT MONITORING

The A310 PT can detect hot spots and overheating equipment by measuring slight changes in surface temperature

- Built-in spot, area measurement, and temperature measurement analysis
- Rugged IP66 environmental rating allows use in harsh environments
- Monitors subtle temperature differences in substations, transformers, waste bunkers, and coal piles



WIDE-AREA SURVEILLANCE FOR FIRE DETECTION

Temperatures exceeding pre-set levels will trigger an alarm

- Set various alarms to different temperature thresholds
- Quickly notify operators of any equipment or area in need of immediate attention
- MPEG-4 video streaming allows live imaging over Ethernet connections

SPECIFICATIONS

Imaging and optical data	
IR resolution	320 × 240 pixels
Thermal sensitivity/NETD	< 0.05°C @ +30°C (+86°F) / 50 mK
Lens identification	Automatic
F-number	1.3
Image frequency	9 Hz / 30 Hz
Focus	Automatic or manual (built in motor)
Zoom	1–8× continuous, digital, interpolating zooming on images
Detector data	
Detector type	Focal Plane Array (FPA), uncooled microbolometer
Spectral range	7.5–13 μm
Detector pitch	25 μm
Detector time constant	Typical 12 ms
Measurement	
Object temperature range	–20 to +120°C (–4 to +248°F) 0 to +350°C (+32 to +662°F)
Accuracy	±4°C (±7.2°F) or ±4% of reading
Measurement analysis	
Spotmeter	10
Area	10 boxes with max./min./average/position
Isotherm	1 with above/below/interval
Atmospheric transmission correction	Automatic, based on inputs for distance, atmospheric temperature and relative humidity
Optics transmission correction	Automatic, based on signals from internal sensors
Emissivity correction	Variable from 0.01 to 1.0
Reflected apparent temperature correction	Automatic, based on input of reflected temperature
External optics/windows correction	Automatic, based on input of optics/window transmission and temperature
Measurement corrections	Global and individual object parameters
Alarm	
Alarm functions	6 automatic alarms on any selected measurement function, camera temperature
Set-up	
Color palettes	Color palettes (BW, BW inv, Iron, Rain)
Set-up commands	Date/time, Temperature°C/°F
Imaging and optical data (visual camera)	
Field of view (FOV)	57.8° (H) to 1.7° (V)
Focal length	3.4 mm (wide) to 122.4 mm (tele)
F-number	1.6 to 4.5
Focus	Automatic or manual (built in motor)
Optical Zoom	36× continuous
Electronic Zoom	12× continuous, digital, interpolating
Detector data (visual camera)	
Focal Plane Array (FPA)	1/4" Exview HAD CCD
Effective pixels	380,000
Technical specification (pan & tilt)	
Azimuth Range	Az velocity 360° continuous, 0.1 to 60°/sec max
Elevation Range	El velocity ± 45°, 0.1 to 30°/sec. max
Programmable presets	128
Automatic heaters	Clears window from ice. Switched on at +4°C (39°F). Switched off at +15°C (59°F).

Ethernet	
Ethernet	Control, result and image
Ethernet, type	100 Mbps
Ethernet, standard	IEEE 802.3
Ethernet, connector type	RJ-45
Ethernet, communication	TBA
Ethernet, video streaming	Two independent channels for each camera - MPEG-4, H.264, or M-JPEG
Ethernet, protocols	Ethernet/IP, Modbus TCP, TCP, UDP, SNMP, RTSP, RTP, HTTP, ICMP, IGMP, ftp, SMTP, SMB (CIFS), DHCP, MDNS (Bonjour), uPnP
Composite video	
Video out	Composite video output, PAL /NTSC compatible
Video, standard	CVBS (ITU-R-BT.470 PAL), CVBS (SMPTE 170M NTSC)
Power system	
Power	24 VAC (21-30 VAC; 24 VAC: 215 VA max. with heater) or 24 VDC (21-30 VDC; 24 VDC: 195 W max. with heater).
Environmental data	
Operating temperature range	–25°C to +50°C (–13°F to +122°F)
Storage temperature range	–40°C to +70°C (–40°F to +158°F)
Humidity (operating and storage)	IEC 60068-2-30/24 h 95% relative humidity +25° C to +40°C (+77°F to +104°F)
EMC	<ul style="list-style-type: none"> • EN 61000-6-2 (Immunity) • EN 61000-6-3 (Emission) • FCC 47 CFR Part 15 Class B (Emission)
Encapsulation	IP 66 (IEC 60529)
Bump	5 g, 11 ms (IEC 60068-2-27)
Vibration	2 g (IEC 60068-2-6)
Physical data	
Weight	17.8 kg (39.3 lb.)
Size (L × W × H)	460 × 467 × 326 mm (18.1 × 18.4 × 12.8 in.)
Housing material	Aluminum
Shipping information	
List of contents	Cardboard box, Pan & tilt with infrared camera including lens, and visual camera, FLIR Sensors Manager download card, Lens cap, Printed documentation, Small accessories kit, User documentation CD-ROM

Optical data				
Model	FOV	Minimum focus distance	Focal Length	Spatial resolution (IFOV)
FLIR A310pt 15°	15° × 11.25°	1.2 m (3.93 ft.)	30.38 mm (1.2 in.)	0.82 mrad
FLIR A310pt 25°	25° × 18.8°	0.4 m (1.31 ft.)	18 mm (0.7 in.)	1.36 mrad
FLIR A310pt 45°	45° × 33.8°	0.20 m (0.66 ft.)	9.66 mm (0.38 in.)	2.59 mrad
FLIR A310pt 6°	6° × 4.5°	4 m (13.11 ft.)	76 mm (3.0 in.)	0.33 mrad
FLIR A310pt 90°	90° × 73°	20 mm (0.79 in.)	4 mm (0.157 in.)	6.3 mrad

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19-0183-SEC



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