Flir FC-Series AI-R

Thermal AI Analytics Camera



neXus

Key Features:

- Detect hot spots and intruders with a single camera
- Eliminate false temperature alarms from hot exhaust pipes with 'vehicle exclusion mode'
- Reliably recognize humans and vehicles with robust DNN analytics
- Differentiate between true threats and nuisance alarms, even when someone is attempting to deceive the system
- Target geolocation for situational awareness and precise handoff to a PTZ device
- Cyber-hardened, seamless integration with Video Management Systems (VMS), including FLIR UVMS and 3rd party VMS

Main Applications:

- Hot spots and fire detection
- Large and small area protection
- Remote site monitoring

SPECIFICATIONS

Overview	
Array format	640 × 512
Detector type	Long-life, uncooled VOx microbolometer
Spectral range	7.5 µm to 13.5 µm
Effective resolution	327,680 pixels
Pixel pitch	17 µm
Thermal frame rate	NTSC: 30 Hz - PAL: 30 Hz / 8.3 Hz
Focus	Athermalized, focus-free
Sensitivity	<25 mK @ 25°C (77°F) for f/1.0
Video	
Composite video NTSC or PAL	Hybrid system with IP & analog video, dynamic NTSC or PAL settings
Analog video output composite	1Vp-p (PAL or NTSC), 1 x BNC 75 Ω
Video compression	Two independent channels of H.264 / H.265 or MJPEG
Streaming resolution	640×512
Thermal Image Settings	Brightness, Contrast, Sharpness, Auto AGC, Digital Detail Enhancement (DDE), Gamma, Smart Screen Optimization
Thermal AGC region of interest	Default, Presets, and User definable to ensure optimal image quality on subjects of interest
Analytics management	Web-based configuration and management; masking of analytic detection areas, adjustable sensitivity, automatic responses, remote I/O control
Analytics features	Region entrance/Intrusion detection, Crossover/fence trespassing, CNN classifier
Image uniformity optimization	Automatic flat field correction (FFC); thermal and temporal triggers
SD card snapshot capture	Support up to 512 GB SD card (sold separately)

System Integration	
Ethernet	10/100 Mbps
External analytics compatible	Yes
Control input/output network	1x dry contact in; 1x relay out (rated load 0.025 A@ 5 V DC)
APIs	NEXUS SDK, NEXUS CGI, ONVIF Profile S, G, T
Network	
Supported protocols	IPV4, HTTP, HTTPS, UPnP, DNS, NTP, RTSP, TCP, UDP, ICMP, IGMP, DHCP, ARP, IEEE 802.1x
General	
Weight with sunshield	7.5/9/13/19/25/35 mm 2.2 kg (4.75 lb) - 60 mm 2.4 kg (5.25 lb) - 75 mm 2.5 kg (5.5 lb)
Weight without sunshield	7.5/9/13/19/25/35 mm 1.8 kg (4 lb) - 60 mm 2.0 kg (4.5 lb) - 75 mm 2.2 kg (4.75 lb)
Dimensions (L × W × H)	Without sunshield: 259 × 114 × 106 mm/10.2 × 4.5 × 4.2 in With sunshield: 282 × 129 × 115 mm/11.1 × 5.1 × 4.5 in
Input voltage	Source: PoE+ (802.3 at) / 12 V DC / 24 V DC / 24 V AC (VA) Heater off: <9 W / <10 W / <9 W / <15 W Heater on (@ 100%): <25 W / <28 W / <25 W / <32 W
Surge immunity on AC power and signal lines	ESD: EN 61000-4-2 RS: EN 61000-4-3; EN 55035 (2017 + A11: 2020); EN 50130-4 EFT: EN 61000-4-4 Surge: EN 61000-4-5 CS: EN 61000-4-6 PFMF: EN 61000-4-8

Speci ications subject to change.

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1.888.610.7664 www.calcert.com sales@calcert.com

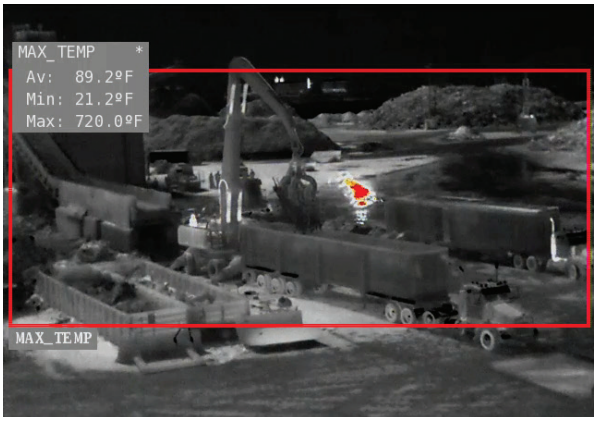
SPECIFICATIONS, CONT.

Cybersecurity	IEEE 802.1x, TLS/HTTPS, User authentication access control via firewall, user credentials with policy enforcement, digest authentication
Environmental	
IP rating (dust & water ingress)	IP66 & IP67
Operating temperature range	-40°C to 70°C/-40°F to 158°F (cold start)
Storage temperature range	-50°C to 85°C (-58°F to 185°F)
Humidity	0-95% relative humidity
Shock	Shock (Operational) MIL-STD-810G, Method 516.6 Shock (Transportation) IEC 60068-2-27:08
Vibration	IEC 60068-2-64:08
Vandalism	IK10 (except lens and windows)
De-icing/Anti-icing	MIL-STD 810F:00 + Notice 1:00 + Notice 2:02 + Notice 3:03
Warranty & Regulatory	
Emission	FCC 47 CFR Part 15, Subpart B, Class A (within CISPR 22:2008 Class A limits); EN55032 Class A
Safety	IEC 62368-1: 2018
Compliance	CE Marked; RoHS III Directive 2015/863/EU; WEEE Directive 2012/19/EU
Warranty	Camera: 3 years / Sensor: 10 years

Optics			
Model	**FOV**	**f/number**	**Focal Length**
FC-669 AI-R	69° × 56°	f/1.4	9 mm
FC-644 AI-R	44° × 36°	f/1.0	13 mm
FC-625 AI-R	25° × 18°	f/1.1	25 mm
FC-617 AI-R	17° × 14°	f/1.1	35 mm

Temperature Measurement	
Measurement accuracy	Target below 100°C (212°F) ±5°C (±9°F) accuracy Target below 150°C (302°F) ±5% accuracy Target above 150°C (302°F) ±15% accuracy Measured at 25°C (77°F) ambient temperature. Error may be greater at extreme temperatures
Object temperature range	High Gain Mode: -40°C to 160°C (-40°F to 320°F) Low Gain Mode: -40°C to 380°C (-40°F to 716°F) Video analytics only functional in High Gain Mode

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