FLIR FC-SERIES AI-R
Thermal AI Analytics Radiometric Camera

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

www.flir.com/fc-series-ai-r

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	30 Hz / 8.3 Hz
Focus	Athermalized, focus-free
Sensitivity	<35 mK @ 25°C (77°F) for f/1.0
Video	
Video type	IP & analog video
Composite analog video output	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, 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, DNN classifier
Image uniformity optimization	Automatic flat field correction (FFC); thermal and temporal triggers
microSD card snapshot capture	Up to 512 GB microSD/microSDHC/ microSDXC 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 VDC)
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, SNMP, IEEE 802.1x
General	
Weight with sunshield	2.2 kg (4.75 lb)
Weight without sunshield	1.8 kg (4 lb)
Dimensions (l × w × h)	Without sunshield: 259 mm × 114 mm × 106 mm / 10.2 in × 4.5 in × 4.2 in With sunshield: 282 mm × 129 mm × 115 mm / 11.1 in × 5.1 in × 4.5 in

Input voltage	Source	PoE+ (802.3at)	12 VDC	24 VDC	24VAC (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

For technical or sales support, please visit:
www.flir.com/about/general-inquiries

SPECIFICATIONS, CONT.

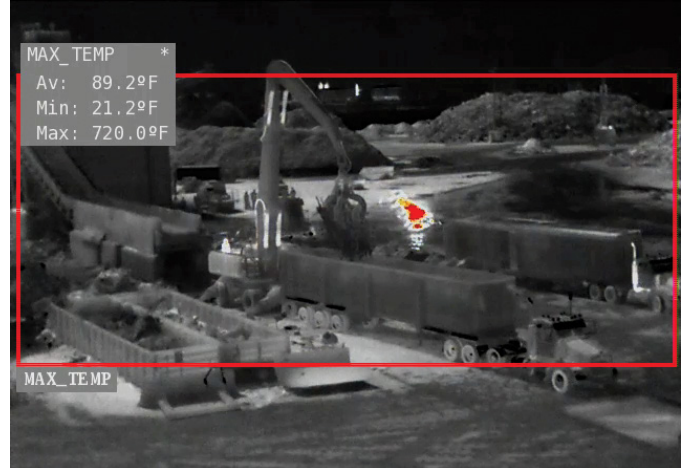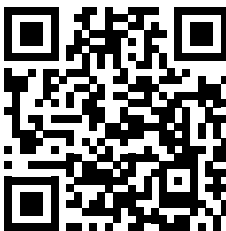|	
Cybersecurity	IEEE 802.1X, TLS/HTTPS, User authentication access control via firewall, user credentials with policy enforcement, digest authentication, IP address filtering

Environmental	
IP rating (dust & water ingress)	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	0-90% 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	EN 62368-1: 2014 + A11: 2017 (certification pending)
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: 0°C to 160°C (32°F to 320°F) Low Gain Mode: 0°C to 380°C (32°F to 716°F) Video analytics only functional in High Gain Mode

Specifications subject to change. For the most up-to-date specifications, please visit flir.com.

NDAA Compliant