FLIR

ELIMEC
electro-mechanical engineering

FC-Series S FC-Series R

IP Thermal Security Camera

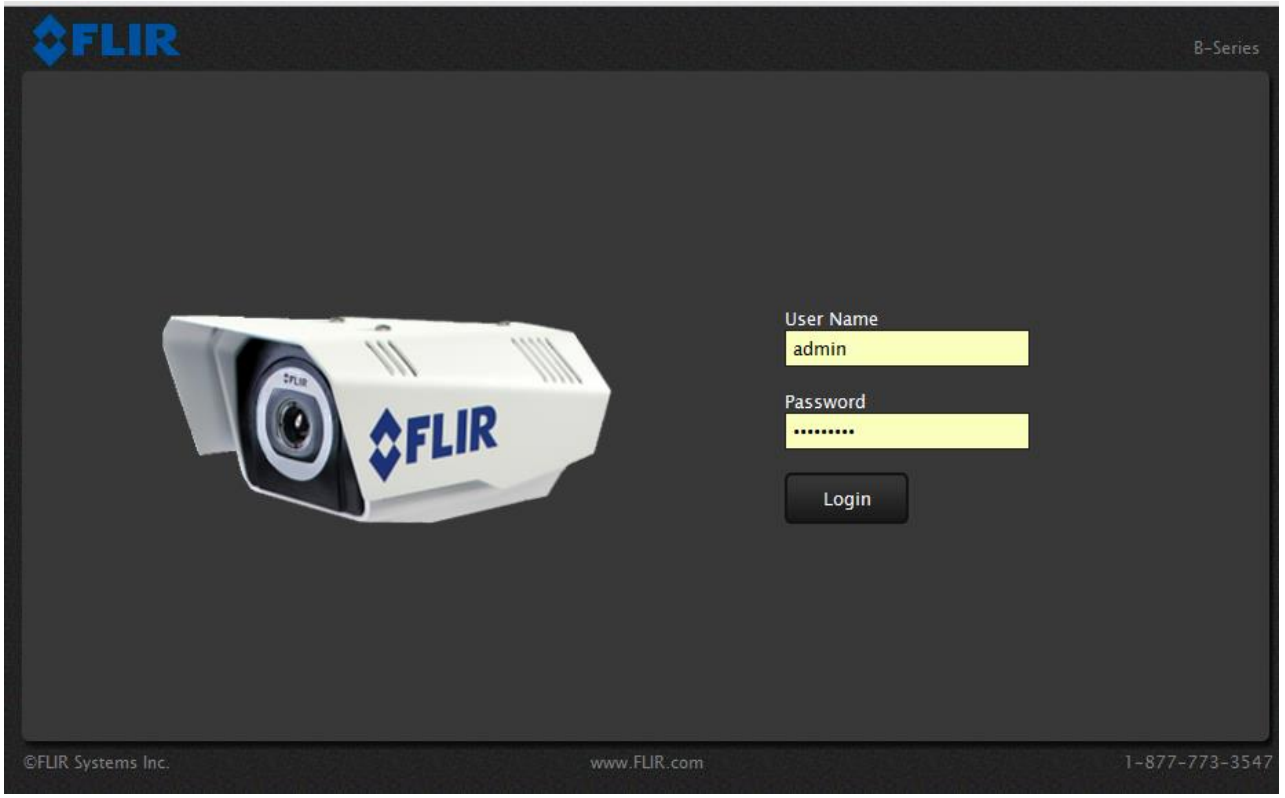
FC-Series

- WDR - Wide Dynamic-Range Thermal camera
  - Industry-leading image quality in all conditions
- POE/12VDC/24VAC power inputs
- High-performance, all-weather, industrial-rated system
- Hybrid architecture – IP & analog video
- More models - Widest array of lens options
- Designed for easy, installation, and long-term reliability
- Attractive price position
- Third party integration , ONVIF etc
- New web interface
- Simple to cable and install

Features

- On-board video analytics with ability to classify human or vehicle intrusions
- Multiple alarming notification options, including email, digital outputs or VMS alarms
- Ideal for use with third-party analytics, including those provided by FLIR's partners around the world
- Camera configuration via web or mobile apps
- Simultaneous IP and analog video outputs
- Open IP standards for plug-and-play integration; ONVIF conformant
- Digital Detail Enhancement (DDE) & Wide Dynamic Range Thermal image processing combine to give you optimal images in dynamic thermal scenes

New Web Interface



- New web design
- Clean Design
- Live-view page

Three User Levels

1) Admin
2) Expert
3) User

Fully Compatible with FSM

- The World's Leading Thermal Camera Control, Viewing & Recording System
- Free with each IP camera
- Free upgrade to 10 sensors
- Advanced tools for configuring FLIR IP cameras
  - AGC
  - DDE
  - Region of Interest

FC-Series S
3rd Party Integration

- FC-Series leverages FLIR's progress with 3rd party integration
- Onvif 2.0 compliant

11 Models – Optimal Lens & Resolution for All Applications

- **Industry-leading 90˚ 640x480**
- More lens & resolutions options than any other mfg
- Supports optimal detection at minimal cost

	Hor. FOV	Vert. FOV	Focal Length
640 x 480			
FC-690	90°	69°	7.5 mm
FC-669	69°	56°	9 mm
FC-645	45°	37°	13 mm
FC-632	32°	26°	19 mm
FC-618	18°	14°	35 mm
320 x 240			
FC-363	63°	50°	7.5 mm
FC-348	48°	37°	9 mm
FC-334	34°	28°	13 mm
FC-324	24°	19°	19 mm
FC-313	13°	10°	35 mm
FC-309	9°	7°	35 mm

Reliability & Robustness

All-Weather Enclosure

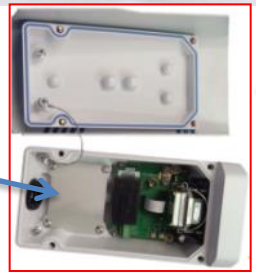
Aluminum sunshield - 5052-H32 provides superior impact & weather resistance compared to plastic designs

Gore® Vent allows water vapor migration

Glass reinforced plastic provides minimal heat deflection & high impact resistance

Cast & heat-treated aluminum enclosure is conversion coated, then receives a thick polyurethane powder coat

Tongue & groove seal provides excellent environmental seal



Highly **compliant cable gland** for easy cable installation & effective sealing **to IP67**

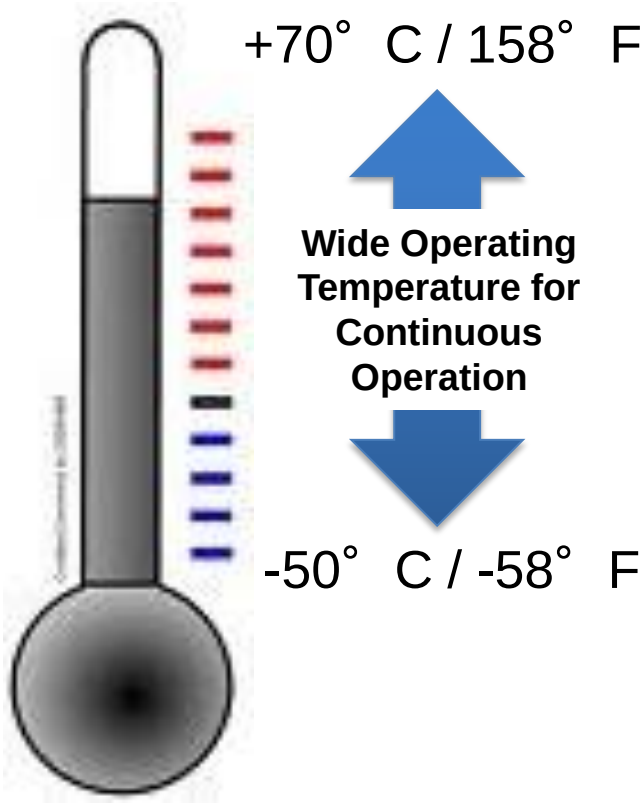
IP67 Configurations

- With cable entry via cable gland

IP66 Configurations

With concealed-cable installation

Robust Environmental Specifications



- **IP67 with FLIR cable gland**
- **IP66 with concealed cable mount**

Vibration: 10g shock pulse with a 11ms half-sine profile

Ice & Freezing Rain? – No Problem!

Not just anti-icing

Before – 6mm Ice & no power

De-iced from cold start

Time Lapse Video

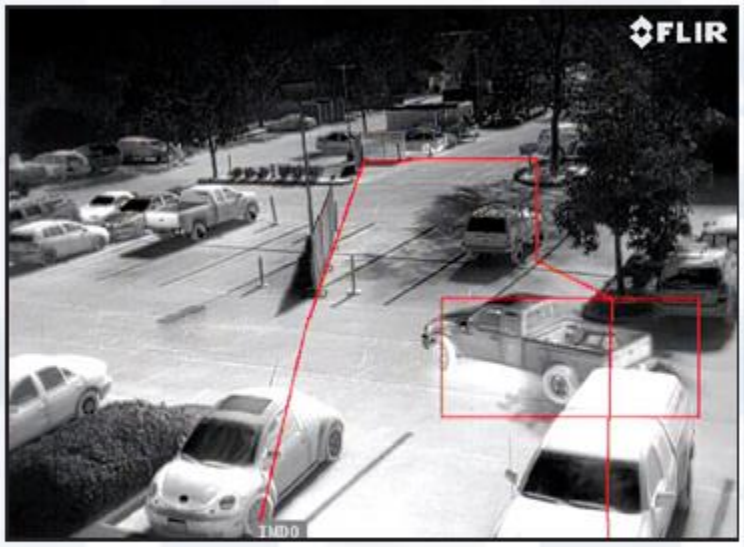
- The FC-Series will rapidly remove a 6mm thick layer of ice.
- Insures optimal operation in cold, windy, snowy or icy conditions.
- Other cameras may melt snow, but may not shed it, after which it refreezes to create an ice dam that will block the camera field of view.

Built-In Surge Protection

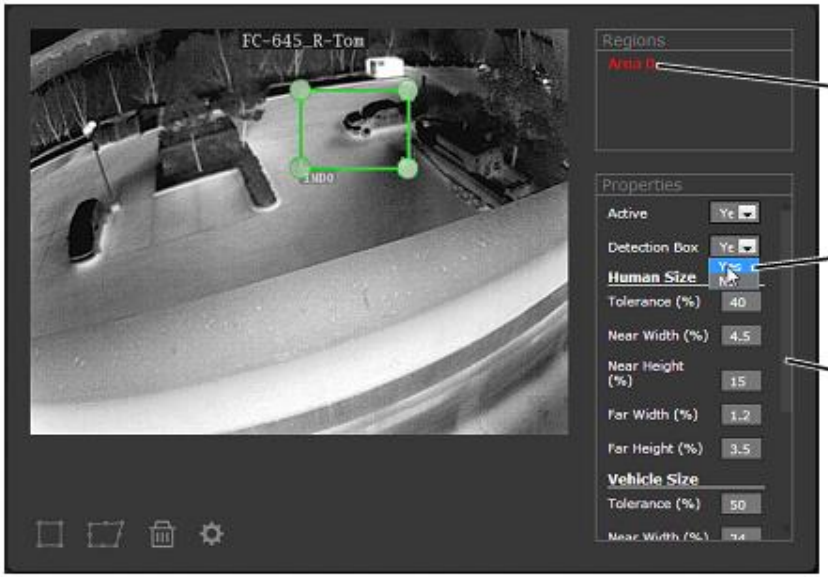
PIDS market participant: "Our most common reason for field return is electrical surge". For FLIR, the return rate is very low.

- **Designed & tested to withstand high levels of electrical surge**
- **Validated according to EU standards.**
- **Lesser products, not designed to the same rigorous industrial standards, may suffer serious damage from 'dirty' power caused by distant lightening or upstream power 'glitches'**

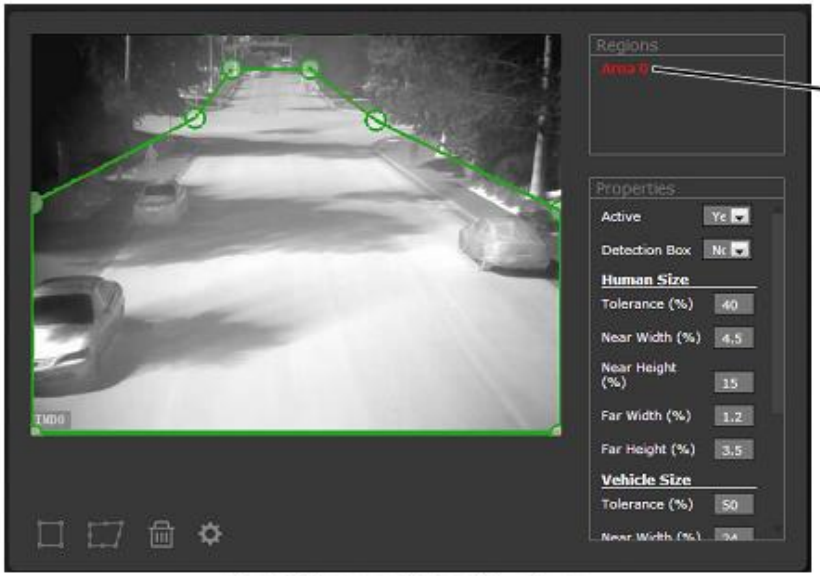
Built in video analytics



FC-Series thermal network cameras can detect human or vehicle intrusions and alert you in multiple ways, including by email, digital outputs or VMS alarms.



Four Corner Detection Area



Eight Corner Detection Area

Ease of Installation

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POE/12VDC/24VAC Power Options

- POE – Power Over Ethernet
  - Standard POE - IEEE 802.3af compliant – provides full operation with anti-icing & some de-icing
  - Hi-POE – IEEE 802.3at compliant - supports full de-icing for extreme cold and/or icy areas where 100 up-time is critical
- 24VAC – ideal for use in retrofit installations where 24VAC and analog video already exist
- 12VDC – less than 5W without heaters – ideal for low-power solar installations

Power Accessories

PoE+ Power Supply

Provides power for maximum de-icing in the most severe conditions.

24VAC Exterior Power Supply

Suitable for single or multiple camera installations. Supports full de-icing. Designed for installation outdoors.

24VDC Power Supply

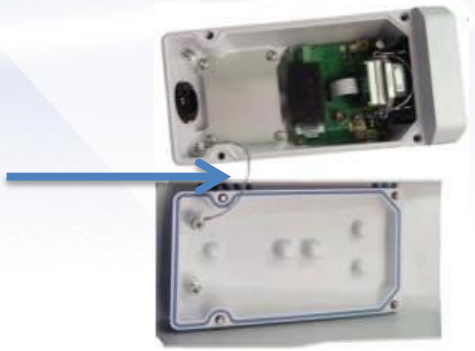
Suitable for short distance cable runs where the power supply will be protected from the elements. Supports full de-icing.

Simple Field Installation

- 4 Captive screws (3mm hex) on cover
- Sun-shield remains in place
- Top retained by tether
- Compatible with standard ¼-20” mounts

Open with 4 retained screws, *no need to remove sun shield*

Safety tether retains cover



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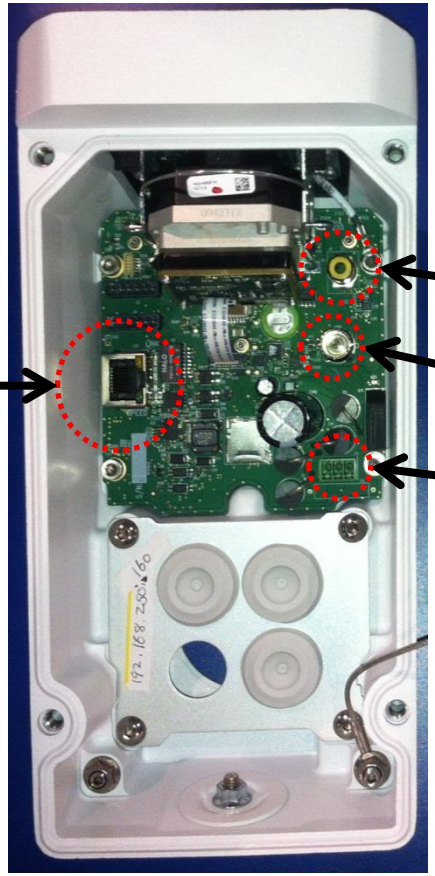
Simple & Clean Connections

Easy & Efficient Installation



RJ-45

Two video wiring options:

RCA monitoring output

BNC

12VDC/24VAC in

Flexible Mounting Examples

Mounting Accessories

Concealed Cable Mounting Arm

The concealed cable mount allows installation of all cabling to be routed inside of the mounting arm. Seals on the camera body insure IP66 protection. The arm can also be used with cables routed to the enclosure through the rear gland.

Pole Mount adapter

Pole mount adapter for use with FC-Series concealed arm mount. Suitable for use with 4″-8″ diameter poles.

Pedestal Mount

Ideal for installation on ledges, walls and from overhead locations such as eaves, tunnel ceilings and bridge decks.

Without Sun Shield

- 50C maximum ambient with sun exposure
- *Sun shield is recommended where feasible*

Third-Party IP Compatibility

- FSM is the preferred Video Management System (VMS)
- FLIR IP video conforms to open standards
- FLIR has adopted ONVIF as the standard for 3rd party compatibility

Examples of Onvif members:

DETECTOR & PRODUCT WARRANTY

10-year protection on the camra's most vital element, the uncooled infrared detector

Up to three years of coverage on the entire camera system

New Warranty statement going out in shipments

"Extended warranty" valid after product is registered on FLIR.com

Training

- Commercial, product overview and general by the sales team
- Technical training with structure three day courses based around Europe. FLIR have full time trainer that conducts training with support of the software design team. This is called FCSI training. Encourage the attendance of integrators
- Will conduct specific ADI training sessions.

On-Site Training

We offer you a wide range of customized on-site training or exclusive training classes for your team or customers. From Introduction of Thermal Imaging up to complete FCSI courses, everything is possible.

Together with our Software Department we can also offer on-site support and training for integration of FLIR products into existing or new security networks as well as FLIR Sensors Manager Operator or Administrator training.

We can help you with our customized on-site training courses for your company, employees as well as your customers to give you the best support and to reduce down times in the field.

Contact us for On-Site Training request > cvs@irtraining.eu

Order numbers and prices for Security Training

Part-ID	Course Title	Price
ITC-SEC-3001	FLIR Certified Systems Integrator Security & Surveillance, 3 days	1500 EUR
contains:		
ITC-SEC-1011	Thermal Imaging Fundamentals for Security, 1 day	500 EUR
ITC-SEC-1021	Installation & Integration for Security, 1 day	500 EUR
ITC-SEC-1031	Nexus®/ FLIR Sensors Manager for Security, 1 day	500 EUR
ITC-MAR-3001	FLIR Certified Systems Integrator Maritime, 3 days	1500 EUR
contains:		
ITC-MAR-1011	Thermal Imaging Fundamentals for Maritime, 1 day	500 EUR
ITC-MAR-1021	Installation & Integration for Maritime, 1 day	500 EUR
ITC-MAR-1031	Nexus®/ FLIR Sensors Manager for Maritime, 1 day	500 EUR
ITC-SEC-1009	On-Site Security Training – group of up to 10 pers./ per day	2000 EUR
ITC-MAR-1009	On-Site Maritime Training – group of up to 10 pers./ per day	2000 EUR
ITC-TOL-1001	Travel and lodging expenses instructor (Europe, Balcans, Turkey, Cyprus)	1000 EUR
ITC-TOL-1002	Travel and lodging expenses instructor (Russia/CIS, Middle East, North Africa)	2000 EUR
ITC-TOL-1003	Travel and lodging expenses instructor (Center and South Africa)	3500 EUR

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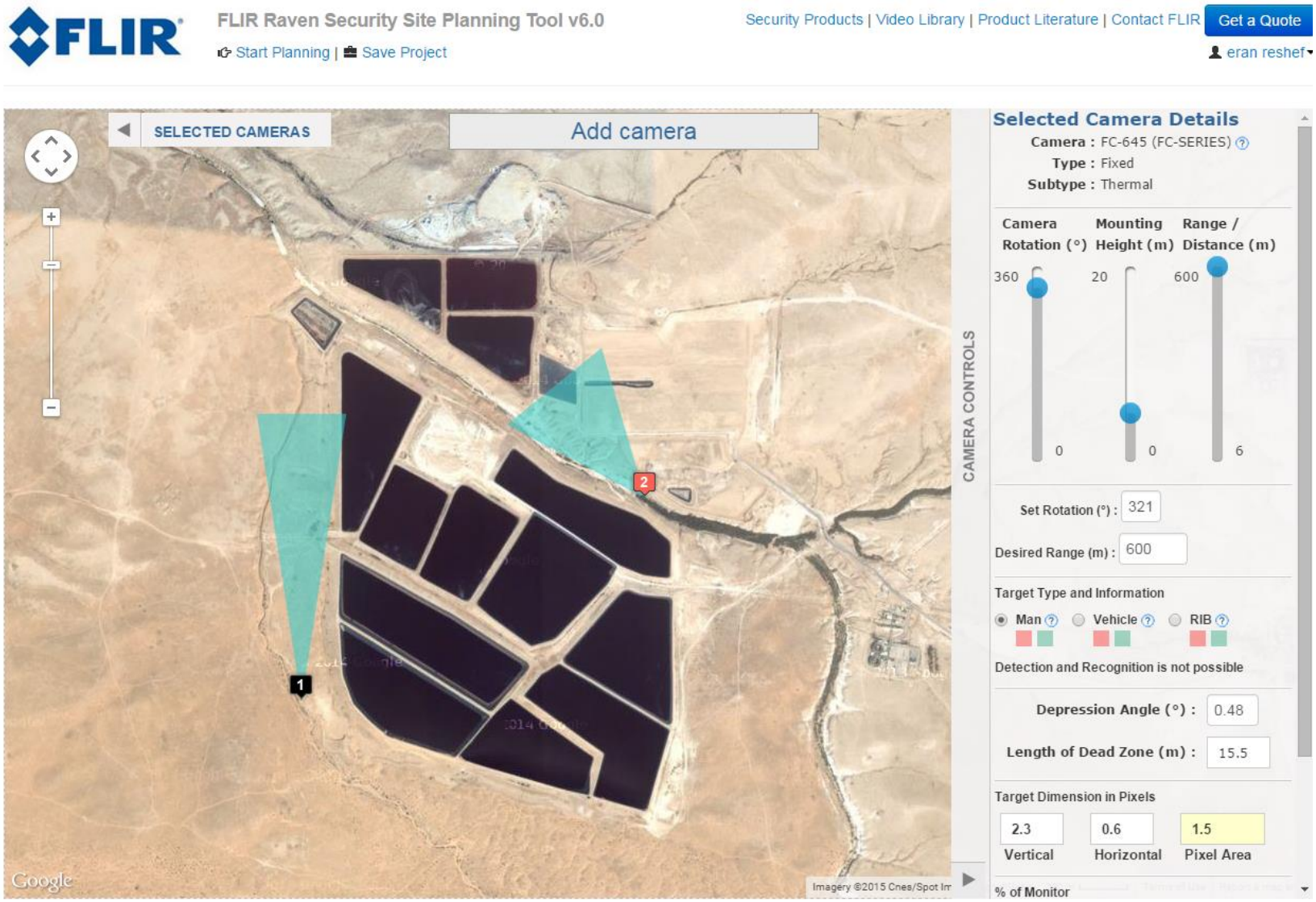
explore the thermal dimension

Site Design Tool

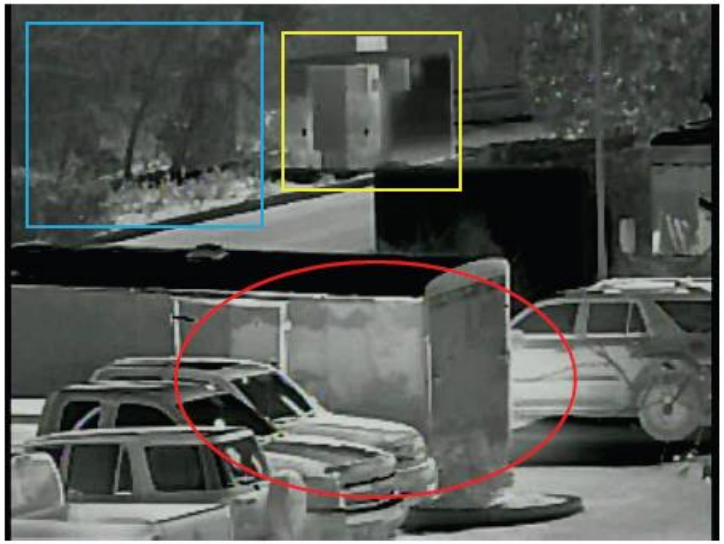
http://raven.flirops.com



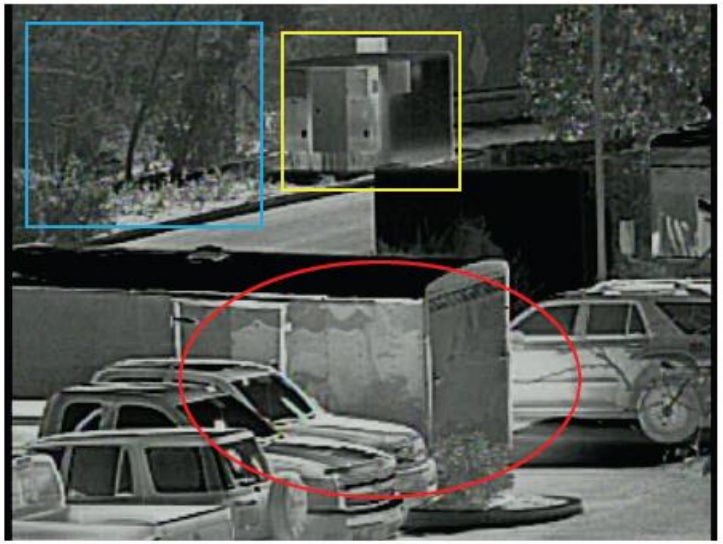
DDE
Digital Detail Enhancement

Auto DDE – FLIR Algorithm for image enhancement

- Automatically adapting to changing scene conditions to optimize the amount of DDE necessary for high contrast video without accentuating noise.
- The net result is increased image quality, extended detection ranges and easier video analysis.



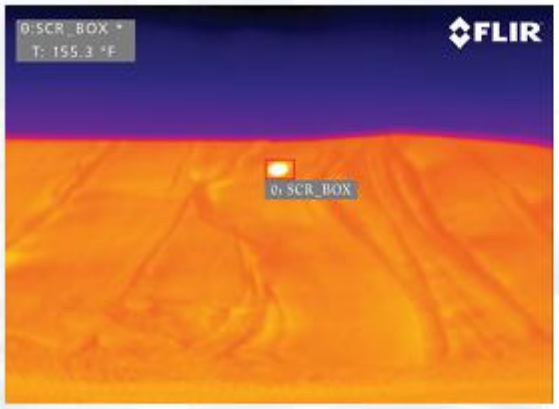
Original DDE - Image collected with SR camera featuring FLIR's original DDE



Auto DDE - Note the high contrast and resolution of the trees in the blue box, the detail on the transformer housing in the yellow box and the increased details on vehicles and trailer in the red oval.

FC-Series R

- The new FLIR FC-Series R is a fixed network thermal security camera that features on-board, non-contact temperature measurement
- capabilities for fire detection, safety, and thermal monitoring .



With the FC-Series R camera, you can monitor the temperature of a specific area. When the pre-set temperature has been reached or exceeded, you'll receive a notification by email, digital output or VMS alarm.

FC-Series R

Features

- On-board video analytics with ability to classify human or vehicle intrusions
- Calibrated temperature measurement for fire detection, safety, and thermal monitoring of equipment
- Multiple alarming notification options, including email, digital outputs or VMS alarms
- Ideal for use with third-party analytics, including those provided by FLIR's partners around the world
- Camera configuration via web or mobile apps
- Wide Dynamic Range Thermal for industry-leading threat detection

Camera Model	FC-Series R	FC-Series R
Thermal Camera		
Array Format (NTSC)	320 x 240	640 x 480
Detector Type	Long-Life, Uncooled VOx Microbolometer	
Effective Resolution	76,800	307,200
Pixel Pitch	25 µm	17 µm
Field of View	34° x 28° (FC-334R; 13 mm) 24° x 19° (FC-324R; 19 mm)	45° x 37° (FC-645R; 13 mm) 32° x 26° (FC-632R; 19 mm)
Zoom	Continuous E-zoom, up to 4X	
Spectral Range	7.5 µm to 13.5 µm	
Focus Range	Athermalized, focus-free	
Temperature Measurement		
Measurement Range	-10°C to 110°C	
Measurement Accuracy	+/-5°C or 5% of reading	
Outputs		
Composite Video NTSC or PAL	Yes; Hybrid system with IP & Analog video	
Video over Ethernet	Two independent channels of H.264, MPEG-4 & M-JPEG (see website for full details)	
Streaming Resolution	D1: 720x576, 4CIF: 704x576, Native: 640x512, Q-Native: 320x256, CIF: 352x288, QCIF: 176x144	
Control		
Ethernet	Yes	
External Analytics Compatible	Yes	
Network APIs	Nexus SDK for comprehensive system control and integration Nexus CGI for http command interfaces ONVIF 2.0 Profile S	

Radiometry Page

Using the **Setup** menu Radiometry page, you can designate up to four areas (spot or box) for temperature measurements. When enabled, these areas provide alarm signals to the camera software. You can define the actions resulting from each alarm condition using the **Maintenance** menu (requires the **admin** login). Refer to the Alarm Manager, pg. 3-20.