



# THERMAL FIREFIGHTING

Handheld - Aerial - And More





# FLIR THERMAL IMAGING CAMERAS

GET THE MOST COMPREHENSIVE VIEW FROM INSIDE, OUTSIDE, AND ABOVE THE SCENE

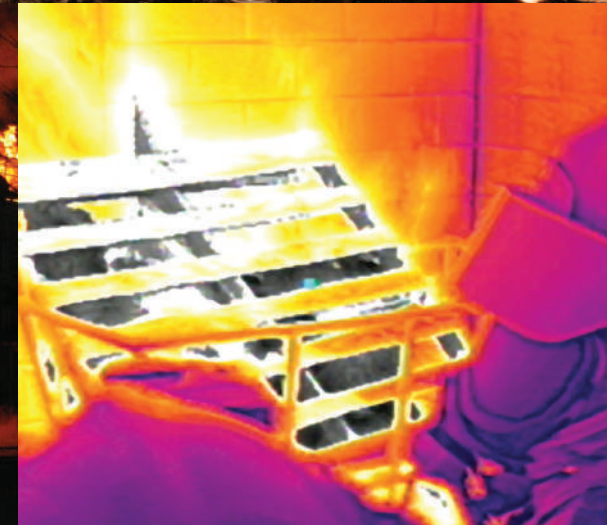
Visibility is a chief concern for maintaining firefighter safety, whether you're in the thick of fighting a fire or coordinating resources as the incident commander. Thanks to the FLIR lineup of cost-effective handhelds, and mounted or UAS aerial thermal imaging options, fire departments can now afford to outfit more firefighters with TICs and monitor all angles of the scene.

This is about more than seeing through a smoke-filled room: viewing the entire scene from multiple viewpoints helps incident commanders make better decisions. FLIR TICs clearly visualize heat sources, they're also an important tool for hazmat and search-and-rescue operations.

With FLIR handheld, drone-mounted, and truck-mounted TICs, you get:

- **A Clear View:** Navigate better thanks to the bright LCD and an image frequency that keeps up with the action.
- **Ultra-Sharp Thermals:** Extra image detail for easier visual orientation with FLIR MSX® or FSX® enhancement.
- **Better View, Better Planning:** Visualizing an overview of the entire scene from a drone-mounted TIC will help you better coordinate resources.
- **Rugged Reliability:** FLIR designed its line of TICs to withstand the toughest firefighting conditions — whether it's a two-meter drop, heavy water spray, or blazing-hot temperatures.

## GOING ABOVE AND BEYOND











# K-SERIES

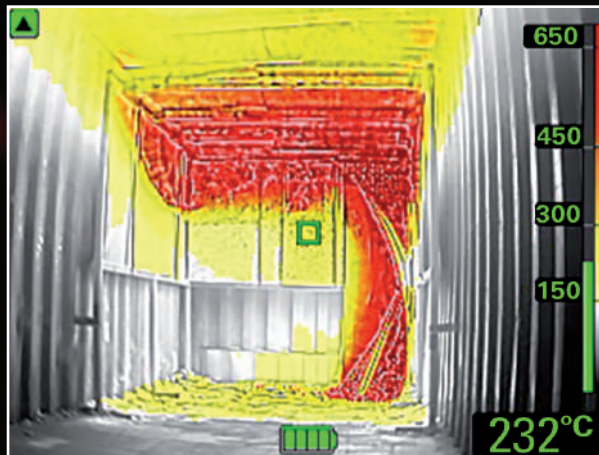
AFFORDABLE, DEPENDABLE, ESSENTIAL

Just like your air pack, radio, and protective gear, FLIR TICs are essential tools for firefighting. With a TIC in hand, you can attack fires more strategically, maneuver through smoke more easily, and save lives. And with a range of technologies and prices from the FLIR K1 Situational Awareness Camera through the NFPA®-compliant FLIR K65, it's easier than ever for departments to afford to issue a TIC to every firefighter.

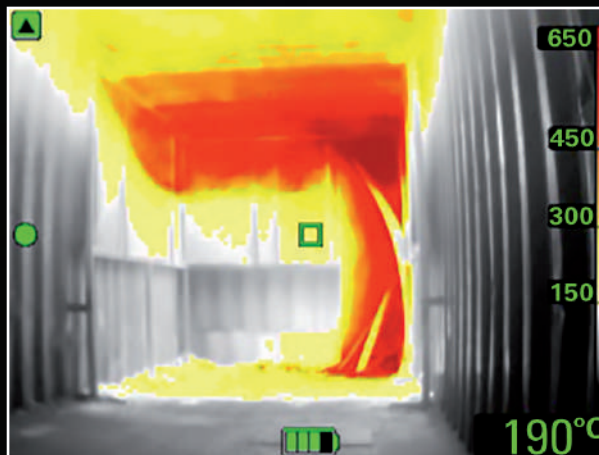
## FSX® - FLEXIBLE SCENE ENHANCEMENT\*

Digital image processing enhances the thermal image in the camera, producing an ultra-sharp view with more scene detail. FSX makes it easier for firefighters to find their way in smoke-filled rooms, even in scenes with extreme temperature dynamics.

WITH FSX



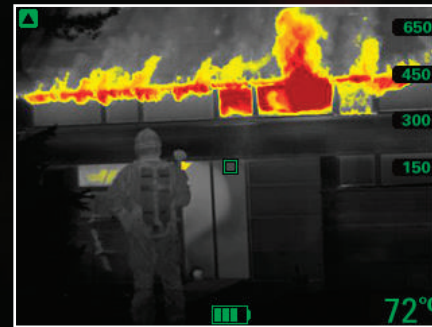
WITHOUT FSX



## IMAGE MODES

### TI BASIC

For initial fire attack and rescue operations; colors represent temperature.



### BLACK & WHITE

Same representations of temperature as the TI Basic mode, but in grayscale.



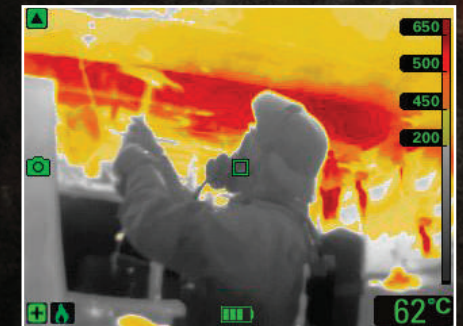
### HEAT DETECTION

Used for finding hotspots. The hottest 20% of the scene is colored red.



### FIRE

For scenes with higher background temps where open flames are present, particularly in structural fires.



### SEARCH & RESCUE

For use with lower temperature situations, such as initial rescue efforts after traffic accidents, searches in wooded areas, etc.



### COLD DETECTION\*

Colorizes coldest 20% of the scene to aid in finding drafts and determining air flows.

\* K2 only



# ADVANCED TECHNOLOGY WITHOUT COMPROMISE

The FLIR Kx5-Series with FSX® displays detail-rich imagery on a large, bright 4-inch LCD to help you navigate the smokiest environments, instantly distinguish people and room features, and make critical decisions.

## FULL PROTECTION:

FLIR 2-5-10 Warranty

- 2 Years Battery
- 5 Years Parts and Labor
- 10 Years Detector



### FLIR K45

240 × 180 pixel detector

#### RUGGED AND RELIABLE

The K45 meets the challenges of intense fire scenes with a drop-resistant, water-resistant design made to operate in 500°F heat for up to five minutes. This affordable TIC saves thermal JPEGs you can play back in the camera or download for later review.



### FLIR K55

320 × 240 pixel detector

#### HIGH-PERFORMANCE

The K55 produces uncompromising, detail-rich imagery you can view in real-time, save as JPEGs, or record as video. Choose one of five image modes designed to help you better navigate heavy smoke, find hidden hot spots, or search for potential victims.



### FLIR K65

320 × 240 pixel detector

#### NFPA 1801 COMPLIANT\*

With fully-sealed connectors and a secured battery, the K65 is designed to be compliant with the NFPA 1801-2021 Standard for Thermal Imagers covering usability, image quality, and durability.

\*National Fire Protection Association and NFPA are registered trademarks of the National Fire Protection Association. The NFPA does not test, certify, or approve any products

# POWERFUL, AFFORDABLE TICS

These low-cost, easy-to-use TICS offer glove-friendly controls for quick operation, but are also enhanced with premium features that help improve situational awareness and give firefighters a greater sense of confidence and safety.



## FLIR K33

240 × 180 pixel detector

### FIREPOWER SIMPLIFIED

Start the K33 in TI-Basic mode with just a press of the button and freeze the image on-screen with a trigger-pull. This affordable handheld produces crisp imagery with FSX enhancement, helping you navigate fire scenes safely.



## FLIR K53

320 × 240 pixel detector

### PREMIUM FEATURES, LOWER PRICE

The K53 combines simplified, one-button controls with advanced features such as FSX enhancement and smooth, 60 Hz image capture to provide reliable vision at an affordable price.



## FLIR Truck Charger

optional

### POWER ON THE GO

FLIR in-truck chargers help ensure your Kxx Series TIC and Spare Battery are always powered up and ready to go.



# RELIABLE SITUATIONAL AWARENESS

FLIR K1 compact thermal cameras make 360° assessment possible in complete darkness and through smoke. Quickly detect and document key findings with internal recording of up to 10,000 thermal/visible image sets.



## FULL PROTECTION:

FLIR 2-10 Warranty

- 2 Years Parts and Labor
- 10 Years Detector



## FLIR K1

160 × 120 pixel detector

## POCKET-PORTABLE AND RUGGED

The FLIR K1 helps you quickly assess the scene without losing line of sight and then document key findings with internal recording of up to 10,000 thermal/visual image sets. Designed to withstand a two-meter drop onto concrete and water resistant (IP67), the K1 offers up to 5.5 hours of radiometric thermal imaging.





# VISION FOR EVERY FIREFIGHTER

FLIR is on a mission to make TICs standard-issue equipment for every firefighter. With modern fires progressing faster than ever, equipping each crew member with a TIC could be the difference between disorientation and life-saving vision.



K2 Mount



#### FULL PROTECTION:

FLIR 2-5-10 Warranty

- 2 Years Battery
- 5 Years Parts and Labor
- 10 Years Detector



#### FLIR K2

160 × 120 pixel detector

#### EASY TO HANDLE

The K2 offers a glove-friendly, one-button control for quick access to the simplified interface, so you can focus on the challenging, fast-changing job at hand. Lightweight but rugged, the K2 can withstand a two-meter drop onto concrete, is water resistant (IP67) and is fully operational up to 500°F (three minutes).



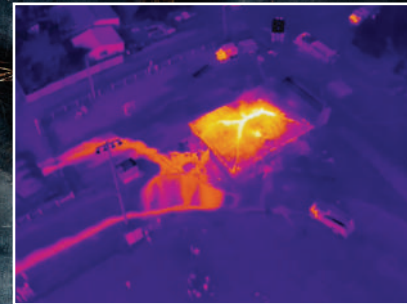


# THE ULTIMATE SOLUTION FOR RELIABLE AERIAL THERMAL IMAGING

FLIR offers a comprehensive set of drone-mounted thermal imaging payloads that have the resolution and optics you need to gain a better understanding of a fire scene, assess a hazardous spill, or aid in a search-and-rescue operation. By using thermal technology, these payloads provide the ultimate solution for reliable, rapidly-deployable aerial thermal imaging.

## UNOBSTRUCTED VIEWS

Scan rooftops and tall buildings from the best vantage point.



## SAFER ASSESSMENTS

View the entire scene safely before making your plan of attack.



## WIDE AREA COVERAGE

Reach the unreachable with the M210's extended flight times.



## SEARCH & RESCUE

Thermal imaging and visual zoom option help you find missing people faster.







**FLIR VUE® TZ20**  
Gimbalized Dual Thermal Zoom Payload

#### MISSION-READY

The dual-Boson® FLIR Vue TZ20 plug-and-play payload improves mission success. It provides a wide 95-degree field of view for maximum situational awareness and a narrow 18-degree FOV to put more pixels on target when needed. With continuous zoom, the FLIR Vue TZ20 gives drone pilots from the public safety and industrial inspection sectors FOV flexibility for improved image detail and magnification to assess situations and make critical decisions.

#### HIGH RESOLUTION DUAL FLIR BOSON CAMERAS

Advanced FLIR resolution and image processing with two 640 × 512 non-radiometric Boson cameras lets you see crisp detail and record clear imagery. Maintain wide field of view to cover large areas or get close in with 2x to 20x zoom.

#### READY TO FLY OUT OF THE BOX

The FLIR Vue TZ20 fully integrates with industry-leading airframes, connects quickly with Skyport V2.0 gimbal, and records in-flight video on two included Micro SD cards.

Visit [www.flir.com/vue-tz20/](http://www.flir.com/vue-tz20/) to find out more information

#### FLIR VUE TZ20

Dimensions	Payload: 75 × 70 × 55 mm With gimbal: 128 × 154 × 141 mm
Weight	640 g
Mechanical Interface	Skyport 2.0
Array format	2 Boson 640 × 512
Pixel Pitch	12 µm LWIR
IR camera optics	Wide FOV: 95° HFOV, 4.9 mm EFL Narrow FOV: 18° HFOV, 24 mm EFL
Thermal sensitivity	50 mK @ F/1.0
Zoom	5x optical (WFOV/NFOV), 4x digital Effective zoom: 1x (95°), 2x, 5x, 10x, 20x (4.5°)
Recording	Still: TIFF Video: MPEG (same as streaming) Multipage TIFF: wide and narrow FOV
Streaming	640 × 512 @ 30 Hz

#### FLIR DUO PRO R

Dimensions	85 × 81 × 69 mm (3.35 × 3.20 × 2.69 in)
Spectral band	7.5 – 13.5 µm
Thermal frame rate	17 µm
Weight	325 g (0.72 lbs)
Thermal lens options	19 mm: 17° × 13°
Thermal sensitivity	<50 mK
Thermal sensor resolution options	336 × 256
Thermal imager	Uncooled VOx Microbolometer

#### FLIR VUE PRO R

Precision mounting holes	Two M2x0.4 on each of two sides & bottom One 1/4-20 threaded hole on top
Size	57 × 44 mm (2.26 × 1.75 in), including lens
Spectral band	7.5 – 13.5 µm
Thermal imager	Uncooled VOx Microbolometer
Zoom	Yes – adjustable in app and via PWM

# Specifications

MODEL	K1	K2	K33	K45
IR resolution	160 × 120 pixels	160 × 120 pixels	240 × 180 pixels	240 × 180 pixels
Thermal sensitivity	<100 mK	<100 mK @ 30°C (86°F)	<40 mK @ 30°C (86°F)	<40 mK @ 30°C (86°F)
Image or contrast optimization	Digital image enhancement with MSX®	Digital image enhancement with MSX®	Digital image enhancement with FSX®	Digital image enhancement with FSX®
Field of view (FOV)	57° × 44°	47° × 35°	51° × 38°	51° × 38°
Image storage	Yes	No	No	Up to 200 JPEG images on internal flash memory
Video storage	No	No	No	No
In-camera video recording	No	No	No	No
<b>IMAGE PRESENTATION</b>				
Display	Backlit 2.4 in, 320 × 240 pixel LCD	Backlit 3 in, 320 × 240 pixel LCD	Backlit 4 in, 320 × 240 pixel LCD	
IR image modes	T1 Basic (White hot with isotherm), White hot, Iron	Basic firefighting mode, Cold detection mode, Building analysis mode, Black-and-white firefighting mode, Fire mode, Search and rescue mode, Heat detection mode	T1 Basic firefighting mode	T1 Basic firefighting mode, Black-and-white firefighting mode, Fire mode, Search and rescue mode, Heat detection mode Thumbnail gallery
Auto range	No	Yes, Non-selectable	Yes, selectable on/off using FLIR Tools	
<b>MEASUREMENT</b>				
Object temperature range	High Gain Mode: -10°C to 140°C (14°F to 284°F) Low Gain Mode: -10°C to 400°C (14°F to 752°F) (at room temperature)	-20°C to 60°C (-4°F to 140°F) 0°C to 500°C (32°F to 932°F)	-20°C to 60°C (-4°F to 140°F) 0°C to 650°C (32°F to 1,202°F)	
Accuracy	Accuracy for ambient temperatures of 10°C to 35°C (50°F to 95°F): High Gain Mode: ±5°C or ±5% Low Gain Mode: ±10°C or ±10%	±4°C (±7.2°F) or ±4% of reading for ambient temperature, 10°C to 35°C (50°F to 95°F)		
Spotmeter	Center spot	1 spotmeter	1 spotmeter	1 spotmeter
<b>SAFETY TESTING</b>				
NFPA 1801:2021 Compliant	No	No	No	No
<b>POWER SYSTEM</b>				
Battery type	Li-ion, 3.7 V rechargeable	Li Ion, > 4 hours operating time		
Charging time	4 hours to 90%, 6 hours to 100%	2.5 h to 90% capacity	2 hours to 85% capacity, status indicated by LEDs	
<b>ENVIRONMENTAL DATA</b>				
Operating temperature range	10°C to 90°C (14°F to 194°F)— up to 10 min, flashlight on -10°C to 115°C (14°F to 239°F)— up to 2 min, flashlight on	-10°C to 55°C (14°F to 131°F) 85°C (185°F): 15 min 150°C (302°F): 10 min 260°C (500°F): 3 min	-20°C to 85°C (-4°F to 185°F) 150°C (302°F): 15 min 260°C (500°F): 5 min	
Storage temperature range	-30°C to 55°C (-22°F to 131°F)	-40°C to 70°C (-40°F to 158°F)	-40°C to 85°C (-40°F to 185°F)	
Humidity (operating and storage/relative)	0°C to 37°C (32°F to 99°F) 37°C to 45°C (99°F to 113°F) 45°C to 55°C (113°F to 131°F)	IEC 60068-2-30/24 h 95% relative humidity 25°C to 40°C (77°F to 104°F) / 2 cycles 95% relative humidity 25°C to 40°C (77°F to 104°F) non-condensing		
Encapsulation, shock, vibration, and drop	IP67 (IEC 60529), 25 g (IEC 60068-2-27), 2 g (IEC 60068-2-6), 2 m (6.6 ft)	IP 67 (IEC 60529), 25 g (IEC 60068-2-27), 2 g (IEC 60068-2-6), 2.0 m / 6.6 ft, on concrete floor (IEC 60068-2-31)	IP 67 (IEC 60529), 25 g (IEC 60068-2-27), 2 g (IEC 60068-2-6), 2.0 m / 6.6 ft, on concrete floor (IEC 60068-2-31)	
<b>PHYSICAL DATA</b>				
Camera weight, incl. battery	0.410 kg (0.904 lb)	0.7 kg (1.54 lb)	1.1 ±0.05 kg (2.4 ±0.1lb)	
Camera size (L × W × H)	208 × 85 × 65 mm (8.19 × 3.3 × 2.6 in)	250 × 105 × 90 mm (9.8 × 4.1 × 3.5 in)	120 × 125 × 280 mm (4.7 × 4.9 × 11 in)	
<b>PACKAGING</b>				
Contents	K1 infrared camera, printed documentation, wrist strap lanyard, USB-C to USB-A cable, tactical pouch	Infrared camera, battery (2×), battery charger, lanyard strap, power supply, USB cable	Infrared camera, hard transport case, battery (2×), battery charger, power supply, retractable lanyard, carabiner strap, USB cable, printed documentation	
<b>OPTIONAL ACCESSORIES</b>				
Hard transport case, carabiner strap, retractable lanyard, extra batteries, in-truck charger, car charger, cigarette lighter adapter kit, tripod adapter				



## Specifications Cont.

MODEL	K53	K55	K65
IR resolution	320 × 240 pixels		
Thermal sensitivity	<30 mK @ 30°C (86°F)		
Image or contrast optimization	Digital image enhancement with FSX®	Digital image enhancement with FSX®	Digital image enhancement with FSX®
Field of view (FOV)	51° × 38°	51° × 38°	51° × 38°
Image storage	Up to 200 JPEG images on internal flash memory (co-dependent on the number of saved video clips)	Up to 200 JPEG images on internal flash memory (co-dependent on the number of saved video clips)	Up to 200 JPEG images on internal flash memory (co-dependent on the number of saved video clips)
Video storage	200 files in total, with a maximum duration of 5 min per video clip	200 files in total, with a maximum duration of 5 min per video clip	200 files in total, with a maximum duration of 5 min per video clip
In-camera video recording	MPEG-4 to internal flash memory	MPEG-4 to internal flash memory	MPEG-4 to internal flash memory
<b>IMAGE PRESENTATION</b>			
Display			
IR image modes	TI Basic firefighting mode	TI Basic firefighting mode, Black-and-white firefighting mode, Fire mode, Search and rescue mode, Heat detection mode Thumbnail gallery	TI Basic NFPA firefighting mode, Black-and-white firefighting mode, Fire mode, Search and rescue mode, Heat detection mode Thumbnail gallery
Auto range	Yes, selectable on/off using FLIR Tools		
<b>MEASUREMENT</b>			
Object temperature range	-20°C to 60°C (-4°F to 140°F) 0°C to 650°C (32°F to 1,202°F)		
Accuracy	±4°C (±7.2°F) or ±4% of reading for ambient temperature, 10°C to 35°C (50°F to 95°F)		
Spotmeter	1 spotmeter	1 spotmeter	1 spotmeter
<b>SAFETY TESTING</b>			
NFPA 1801:2021 Compliant	No	No	Yes
<b>POWER SYSTEM</b>			
Battery type	Li Ion, > 4 hours operating time		
Charging time	2 hours to 85% capacity, status indicated by LEDs		
<b>ENVIRONMENTAL DATA</b>			
Operating temperature range	-20°C to 85°C (-4°F to 185°F) 150°C (302°F): 15 min 260°C (500°F): 5 min		
Storage temperature range	-40°C to 85°C (-40°F to 185°F)		
Humidity (operating and storage/relative)	IEC 60068-2-30/24 h 95% relative humidity 25°C to 40°C (77°F to 104°F) / 2 cycles 95% relative humidity 25°C to 40°C (77°F to 104°F) non-condensing		
Encapsulation, shock, vibration, and drop	IP 67 (IEC 60529), 25 g (IEC 60068-2-27), 2 g (IEC 60068-2-6), 2.0 m / 6.6 ft, on concrete floor (IEC 60068-2-31)		
<b>PHYSICAL DATA</b>			
Camera weight, incl. battery	1.1 ±0.05 kg (2.4 ±0.1lb)		
Camera size (L × W × H)	120 × 125 × 280 mm (4.7 × 4.9 × 11 in)		
<b>PACKAGING</b>			
Contents	Infrared camera, hard transport case, battery (2x), battery charger, power supply, retractable lanyard, carabiner strap, USB cable, printed documentation		Infrared camera, 2 batteries, battery charger, hard transport case, carabiner strap, power supply, Torx screwdriver (T20), retractable lanyard, USB cable, printed documentation. Optional truck charger available.
<b>OPTIONAL ACCESSORIES</b>			
	Hard transport case, carabiner strap, retractable lanyard, extra batteries, in-truck charger, car charger, cigarette lighter adapter kit, tripod adapter		

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