THERMAL FIREFIGHTING

Full Force Coverage from the Ground Up

Handheld - Aerial - Fixed Mounted

◆FLIR®

FLIR THERMAL IMAGING CAMERAS FOR FIREFIGHTING

FLIR'S EXPANDED LINEUP OF THERMAL IMAGING CAMERAS (TICS) GIVES YOU THE MOST COMPREHENSIVE VIEW OF THE SCENE — FROM INSIDE, OUTSIDE, AND ABOVE THE FIRE.

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 FLIR's lineup of cost-effective handhelds and mounted and UAS aerial 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. And, since FLIR TICs clearly visualize heat sources, they're 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.

- Early Warning: Truck- and ladder-mounted cameras allow you to detect fire intensity from a safe distance.

- 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.

FULL FORCE

— Thermal Coverage From The Ground Up —

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 introductory K2 model through the NFPA®-compliant FLIR K65, it's easier than ever for departments to afford to issue a TIC to every firefighter.

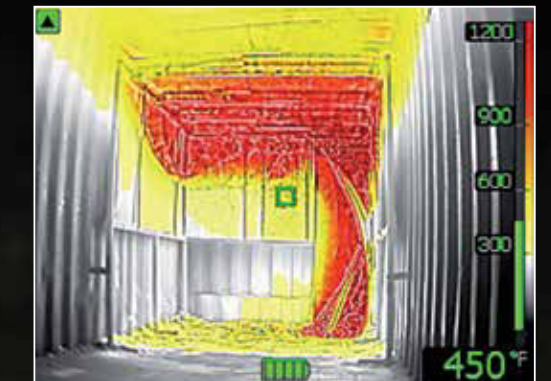## FSX® - FLEXIBLE SCENE ENHANCEMENT*

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.

KF6 and all K-Series models except K2

WITHOUT FSX

WITH FSX

IMAGE MODES

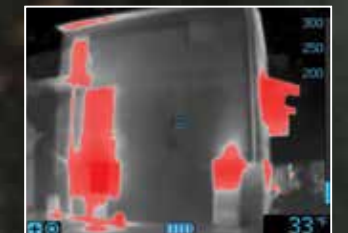| TI BASIC	BLACK & WHITE	FIRE	SEARCH & RESCUE	HEAT DETECTION
For initial fire attack and rescue operations; colors represent temperature.	Same representations of temperature as the TI Basic mode, but in grayscale.	For use in scenes with higher background temperatures where a lot of open flames are present, particularly in structural fires.	For use with lower temperature situations, such as initial rescue efforts after traffic accidents, searches in wooded areas, etc.	Used for finding hotspots. The hottest 20% of the scene is colored red.

FLIR K45, K55, K65

HIGH-PERFORMANCE TICS

The FLIR Kx5 Series with FSX offers detail-rich imagery displayed on a large, bright 4 in. LCD, so you can navigate the smokiest environments, instantly distinguish people, room featues and make critical decisions.

FLIR K45
240 × 180 pixel detector

FLIR K55
320 × 240 pixel detector

FLIR K65
320 × 240 pixel detector

Review and Recap
Save thermal images for on-site review or recap reporting once the fire is out. The K45 is FLIR's most affordable model to record JPEGs, while the K55 and K65 also record video to internal flash memory.

Uncompromisingly Tough
FLIR designed its K-Series TICs to withstand the toughest firefighting conditions – from two-meter drops onto concrete to blasts from the hose. They remain fully operational in 500°F heat for up to 5 minutes.

NFPA 1801 Compliant*
With fully-sealed connectors and a secured battery, the K65 is designed to be fully compliant with the NFPA 1801-2013 Standard for Thermal Imagers covering usability, image quality, and durability for firefighting.

* 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.

FLIR K2, K33, K53

POWERFUL, AFFORDABLE TICS

FLIR is on a mission to make powerful TICs standard-issue equipment for every firefighter. Along with providing your team with feature-packed FLIR TICs, make sure each crew member has a FLIR K2 in hand so everyone will have the essentials for working faster and safer.

FLIR K2
160 × 120 pixel detector

FLIR K33
240 × 180 pixel detector

FLIR K53
320 × 240 pixel detector

Truck Charger

K2 Mount

Easy to Handle
These one-button TICs provide quick access to the simplified user interface, so you can stay focused on the challenging and fast-changing job at hand.

Face the Heat Longer
Keep working and keep safe with FLIR high-performance TICs. The K33 and K53 models can maintain full operation for 15 minutes at 302°F, or up to 500°F for five minutes.

Premium Features, Lower Price
The FLIR K53 combines premium features such as FSX image enhancement, thermal image recording, and video recording with simplified, one-button functionality.

FLIR K-Series Handheld TIC Specifications

Model	K2	K33	K45	K53	K55	K65
IR resolution	160 x 120 pixels	240 x 180 pixels	240 x 180 pixels	320 × 240 pixels		
Thermal sensitivity	<100 mK @ 30°C (86°F)	<40 mK @ 30°C (86°F)	<40 mK @ 30°C (86°F)	<30 mK @ 30°C (86°F)		
Image or contrast optimization	Digital image enhancement with MSX®	Digital image enhancement with FSX™				
Field of view (FOV)	47° × 35°	51° × 38°				
Image storage	No	No	Up to 200 JPEG images on internal flash memory (co-dependent on the number of saved video clips)			
Video storage	No	No	No	200 files in total, with a maximum duration of 5 min per video clip		
In-camera video recording	No	No	No	MPEG-4 to internal flash memory		
Image presentation						
Display	Backlit 3 in, 320 x 240 pixel LCD	Backlit 4 in, 320 x 240 pixel LCD				
Image modes	IR Image: Basic firefighting mode, Cold detection mode, Building analysis mode, Black-and-white firefighting mode, Fire mode, Search and rescue mode, Heat detection mode	IR Image: TI Basic firefighting mode	IR Image: TI Basic firefighting mode, Black-and-white firefighting mode, Fire mode, Search and rescue mode, Heat detection mode Thumbnail gallery	IR Image: TI Basic firefighting mode	IR Image: TI Basic firefighting mode, Black-and-white firefighting mode, Fire mode, Search and rescue mode, Heat detection mode Thumbnail gallery	IR Image: TI Basic NFPA firefighting mode, Black-and-white firefighting mode, Fire mode, Search and rescue mode, Heat detection mode Thumbnail gallery
Auto range	Yes, Non-selectable	Yes, selectable on/off using FLIR Tools				
Measurement						
Object temperature range	−20°C to 150°C (−4°F to 302°F) 0°C to 500°C (32°F to 932°F)	−20°C to 150°C (-4°F to 302°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					
Safety testing						
NFPA 1801:2013 Compliant	No	No	No	No	No	Yes
Power system						
Battery type	Li Ion, > 4 hours operating time					
Charging time	2.5 h to 90% capacity	2 hours to 85% capacity, status indicated by LEDs				
Environmental data						
Operating temperature range	−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	−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)	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)					
Physical data						
Camera weight, incl. battery	0.7 kg (1.54 lb)	1.1 ±0.05 kg (2.4 ±0.1lb)				
Camera size (L × W × H)	250 x 105 x 90 mm (9.8 x 4.1 x 3.5 in)	120 × 125 × 280 mm (4.7 x 4.9 x 11 in)				
Packaging						
Packaging, contents	Infrared camera, Battery (×2), Battery charger, Lanyard strap, Power supply, USB cable	Infrared camera, Battery (×2), Battery charger, Hard transport case, Lanyard strap, Neck strap, Retractable lanyard, Power supply, USB cable				Infrared camera, Battery (×2), Battery charger, Hard transport case, Power supply, USB cable, Torx screwdriver (T20)
Optional Accessories						
	Hard transport case, Carabiner strap, Retractable lanyard, Extra batteries, In-truck charger, Car charger, Cigarette lighter adapter kit, Tripod adapter					

SURVIVAL

STRUCTURE CONSUMED, RESCUE MADE, LIFE SAVED, TIC RECOVERED – *Fully Operational and Ready for Action*

Ceiling collapsing, carpet melting, and the scene deteriorating around them — two firefighters battled their way through a burning home, searching for a woman trapped somewhere on the second floor. With grit and the help of their FLIR K2 thermal imaging camera, they found her. But by then, the flames had trapped all three in a bedroom — the closed door, already engulfed in flames. The firefighters dropped the K2 to free their hands for an escape, leaving it to burn with the structure.

And yet…
Not only did the woman and the crew survive, so did the K2. Read this remarkable story to learn how the crew — and the K2 — escaped harm.

Visit www.flir.com/survival to read more of the story…

FLIR AERIAL FIRST RESPONDER KITS

QUICK TO MOUNT, EASY TO FLY

FLIR's Aerial Thermal Imaging Kits combine the easy-to-fly M210 drone from DJI with the Zenmuse XT thermal imaging camera. These drone-mounted cameras 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 combining the flight stability and powerful video transmission system of a DJI drone with FLIR thermal technology, these kits provide the ultimate solution for reliable, rapidly-deployable aerial thermal imaging.

FLIR M210
Multiple Payload Configurations

DJI M210 & Zenmuse XT
Fast, efficient, and stable, the M210 is ideal for large scale inspections and surveys of active fire scenes. It can also be a critical tool for search-and-rescue scenarios.

Mission-Ready
This kit provides everything needed to mount the camera and be ready to launch in minutes. This DJI drone comes with the powerful Lightbridge system for video transmission, camera control, and digital recording.

Clear, Comprehensive View
FLIR's Aerial Thermal Imaging Kits offer cameras with optimized resolution and wide-angle optics, ensuring you'll have the right combination of situational awareness, magnification, and area coverage to monitor any scene.

Vital for Day or Night
FLIR's Zenmuse XT thermal camera can see through smoke, allowing incident commanders to easily monitor personnel at large scenes or check roof conditions while firefighters are inside. Because it visualizes heat, Zenmuse XT is also a must-have for search-and-rescue operations — any time of day.

FLIR M200
Single Payload

FLIR Aerial First Responder Kits

Model	M210 640 - 13 mm (Radiometric)
Aircraft model[1]	DJI M210[1]
Included tablet interface	DJI CrystalSky Display 7.87"
RC unit- 1 included	DJI Cendence RC
Aircraft battery	Qty 4 TB50 (4280 mAh) & Qty 2 TB55 (7660 mAh)
Visual camera gimbal	DJI X4S 20 MP, 4K/60 H.264
	4K/30 H.265 videos at a 100 Mbps
Gimbal mount (IR & visual)	Single Downward, Dual Downward, Single Upward
Compatible cameras	Zenmuse X4S (included)
	Zenmuse XT (included)
	Zenmuse X5S (optional)*
	Zenmuse X30 (optional)*
Thermal gimbal	Radiometric IR Camera
	640 × 512 Resolution
	13 mm (45° × 35° FOV) Lens
Thermal imager	Uncooled VOx Microbolometer
IR sensitivity	<50 mK at f/1.0
Scene Range (High Gain)	-25°C to 100°C (-13°F to 212°F)
Scene Range (Low Gain)	-40°C to 550°C (-40°F to 1022°F)
Spot Meter	Temperature measured in 4 × 4 pixel spot
File Storage	Micro SD Card
Photo/Video Format	Radiometric JPEG, TIFF, MP4
Operating Temperature Range	-10°C to 40°C (14°F to 104°F)
Weight	.27 kg (.59 lb)

UNOBSTRUCTED VIEWS
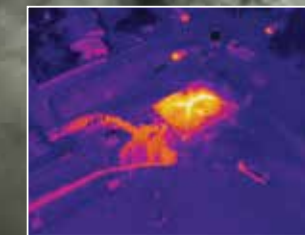
Scan rooftops and tall buildings from the best vantage point.

SAFER ASSESSMENTS

View the enite 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 KF6

GET A STRATEGIC VIEW OF THE SCENE

Steer clear of danger and assess the scene from a new vantage point with the FLIR K6. This specially-designed camera can feed thermal video from aerial buckets or ladders, for a strategic angle of rooftops, upper stories, and tall structures.

High Resolution for Critical Detail

The KF6's high-resolution 640 × 480 thermal imagery allows firefighters to evaluate fires from a safe distance, check liquid levels in tanker trucks, scan crash scenes for skid marks, and spot victims ejected from vehicles. The KF6 also offers FSX® digital enhancement for easy identification of buildings and locations.

Mounts easily with four bolts

First responders don't have time to fiddle with electronics. The KF6 cameras are easy to mount and connect to existing systems atop platforms, under platforms, to ladders and on vehicle roofs

Simple to View and Control

View thermal video and control your TIC from inside the truck, at ground level, or atop the aerial platform. The KF6 connects with just one cable to your in-truck LCD or to a monitor positioned outside – or connects over Wi-Fi to wireless-enabled systems.

CDMQ Ruggedness

FLIR built its truck-mounted cameras to meet the toughest requirement: the Commercially Developed, Military Qualified (CDMQ) standards.

FLIR KF6 Specifications

Model	KF6
IR resolution	640 × 480
Thermal sensitivity	<100 mK @ f/1.4
Image or contrast optimization	Digital image enhancement with FSX®
Field of view (FOV)	69° × 56°
Image presentation	
Image mode	TI Basic firefighting mode
Auto range	Yes
Measurement	
Object temperature range	High-gain range: –25°C to 135°C (–13°F to 275°F) Low-gain range: 0°C to 550°C (32°F to 1022°F)
Accuracy	±10°C (±18°F) or ±10% in high gain range
Spotmeter	1 spotmeter
Video	
Video out	Composite video output, NTSC- and PAL-compatible models
Power system	
Power input	10.5 – 32 VDC (ISO 7637-2)
Start-up time	<25 sec.
Power consumption	<5 W average when supplied with 28 VDC
Certifications	MIL-STD-810G, IP67, IEC 600 68-2-27, IEC 600 68-2-6
Environmental data	
Operating temperature range	-32°C to 65°C (-26°F to 149°F)
Storage temperature range	-40°C to 70°C (-40°F to 158°F)
Humidity (operating and storage/relative)	IEC 600 68-2-30, 24 hours, 95% relative humidity, 25°C–40°C (77°F–104°F) , two cycles
Encapsulation, shock, vibration, and drop	IP 67 (IEC 605 29) IEC 600 68-2-27, 25 g peak half sine wave IEC 600 68-2-6, 0.15 mm 10 Hz to 58 Hz and 2 g 58 to 500 Hz sinusoidal
Physical data	
Camera weight	1.2 ±0.1 kg (2.6 ±0.2 lb)
Camera size (L × W × H)	158 mm × 112 mm × 89 mm (6.2 in × 4.4 in × 3.5 in)
Packaging	
Packaging, contents	Infrared camera, printed documentation

AERIAL MOUNT FLEXIBILITY

Securely attaches to aerial platforms or to the end of straight sticks.

OVERHEAD ADVANTAGE

High-angle thermal view provides situational awareness and helps your team plan effective targeting.

FULL PROTECTION

FLIR'S 5-10 Warranty

• 5 Year Full Product/Parts & Labor
• 10 Years Detector

Specifications are subject to change without notice

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FLIR® | The World's Sixth Sense®