



THERMAL CAMERA MATRIX



Specifications	Mobile		Compact	Industrial			Point & Shoot					Professional				High-Performance								
Model	FLIR ONE Pro LT	FLIR ONE Pro	C5	TG275	TG267	TG297	E4	E5	E5-XT	E6-XT	E8-XT	E53	E75	E85	E95	T530	T540	T840	T620	T640	T860	T1010	T1020	
IR resolution	80 × 60 (4,800 pixels)	160 × 120 (19,200 pixels)	160 × 120 (19,200 pixels)	160 × 120 (19,200 pixels)			80 × 60 (4,800 pixels)	120 × 90 (10,800 pixels)	160 × 120 (19,200 pixels)	240 × 180 (43,200 pixels)	320 × 240 (76,800 pixels)	240 × 180 (43,200 pixels)	320 × 240 (76,800 pixels)	384 × 288 (110,592 pixels)	464 × 348 (161,472 pixels)	320 × 240 (76,800 pixels)	464 × 348 (161,472 pixels)		640 × 480 (307,200 pixels)		640 × 480 (307,200 pixels)	1024 × 768 (786,432 pixels)		
UltraMax® resolution	-	-	-	-			-					-	307,200 pixels	442,368 pixels	645,888 pixels	307,200 pixels	645,888 pixels		1.2 MP		1.2 MP	3.1 MP		
MSX® image enhancement	Yes	Yes	Yes	Yes			Yes					Yes				Yes								
Color viewfinder	-	-	-	-			-					-				-	Yes	-	Yes	Yes	-	Yes	-	Yes
Thermal sensitivity	<0.1°C	<0.07°C	<0.10°C	<70 mK			<0.15°C	<0.10°C	<0.10°C	<0.06°C	<0.05°C	<0.04°C	<0.03°C				<0.03°C		<0.04°C	<0.03°C	<0.03°C	<0.025°C	<0.02°C	
Temperature range	-20°C to 120°C (-4°F to 752°F)	-20°C to 400°C (-4°F to 752°F)	-20 to 400°C (-4 to 752°F)	-25°C to 550°C (-13°F to 1022°F)	-25°C to 380°C (-13°F to 716°F)	-25°C to 1030°C (-13°F to 1886°F)	-20°C to 250°C (-4°F to 482°F)	-20°C to 400°C (-4°F to 752°F)	-20°C to 550°C (-4°F to 1022°F)	-20°C to 650°C (-4°F to 1,200°F)	-20°C to 650°C (-4°F to 1,200°F)	-20°C to 1,200°C (-4°F to 2,192°F)	-20°C to 1,500°C (-4°F to 2,732°F)	-20°C to 650°C (-4°F to 1,202°F)	-20°C to 1,500°C (-4°F to 2,732°F)	-40°C to 650°C (-40°F to 1,202°F)	-40°C to 2,000°C (-40°F to 3,632°F)	-20°C to 2000°C (-4°F to 3632°F)	-40°C to 650°C (-40°F to 1,202°F)	-40°C to 2,000°C (-40°F to 3,632°F)	-20°C to 2000°C (-4°F to 3632°F)	-40°C to 650°C (-40°F to 1,202°F)	-40°C to 2000°C (-40°F to 3,632°F)	
Field of view	50° × 38°	55° × 43°	54° × 42°	57° × 44°			45° × 34°					24° × 18°	Lens dependent				Lens dependent		Lens dependent		Lens dependent	Lens dependent		
Measurement tools	Spotmeter		Spotmeter (center spot), area box (max/min)	Center spot on/off			Spotmeter (center spot)	Spotmeter (center spot), area box (max/min)		Spotmeter (center spot), area box (max/min), isotherm (above/below/interval)	No measurement, center spot, hot spot, cold spot, 3 spots, hot spot-spot*	3 spotmeters, 1 area box (max/min), hot spot, cold spot, User Presets (1&2), Delta T	3 spotmeters, 3 area boxes (max/min), hot spot, cold spot, User Presets (1 & 2), Delta T			3 spotmeters, 3 area boxes (max/min), hot spot, cold spot, User Presets (1 & 2), Delta T		10 spotmeters, 5+5 area boxes, hot spot, cold spot, User Presets (1 & 2), Delta T	10 spotmeters, 5+5 area boxes, profile (max/min), hot spot, cold spot, User Presets (1 & 2), Delta T	3 spotmeters, 3 area boxes (max/min), hot spot, cold spot, User Presets (1 & 2), Delta T	1 spotmeter, 1 area box (max/min/avg.), profile (max/min), hot spot, cold spot, User Presets (1 & 2), Delta T	10 spotmeters, 5+5 area boxes (max/min/avg.), profile (max/min), hot spot, cold spot, User Presets (1 & 2), Delta T		
Communication modes	USB-C, micro-USB and Lightning		USB, Wi-Fi, Bluetooth, FLIR Ignite Cloud Service	USB Type-C: data transfer/power, USB 2.0, Bluetooth® BLE			USB, Wi-Fi					USB 2.0, Wi-Fi, Bluetooth, DisplayPort				USB 2.0, Wi-Fi, Bluetooth, DisplayPort		USB, Wi-Fi, Bluetooth, mini-HDMI		USB 2.0, Wi-Fi, Bluetooth, DisplayPort	USB Micro-B, HDMI	USB Micro-B, Wi-Fi, Bluetooth, HDMI		
Touchscreen	-	-	3.5 in (8.9 cm)	-			-					4 in (10.16 cm)				4 in (10.16 cm)		4.3 in (10.92 cm)		4 in (10.16 cm)	4.3 in (10.92 cm)			
On-screen text, image sketch	-	-	Yes	-			-					Yes				Yes		-		-	Yes			
Voice annotation	-	-	-	-			-					Yes				Yes		-		-	Yes			
Laser pointer	-	-	-	Center spot and circular area			-					Yes				Yes		-		-	Yes			
METERLINK®	-	-	-	-	Yes	-	-					Yes				Yes		-		-	Yes			
Radiometric JPEG	Yes	Yes	Yes	JPEG w/ spot temp data			Yes					Yes				Yes		-		-	Yes			
IR video storage	Yes	Yes	-	-			-					Yes				Yes		-		-	Yes			
Built-in GPS/Compass	-	-	-	-			-					Yes				Yes		-		-	Yes			
Available lenses	-	-	-	-			-					-	14°, 24° and 42° AutoCal™ lenses			6°, 14°, 24° and 42° AutoCal™ lenses		7°, 15°, 25°, 45° and 80°		6°, 14°, 24°, 42° AutoCal lenses	7°, 12°, 28° and 45°			

*Hot spot to center spot Delta measurement

Equipment described herein is subject to us export regulations and may require a license prior to export. Diversion contrary to US law is prohibited. Imagery for illustration purposes only. Specifications are subject to change without notice. For the most up-to-date specs, please visit flir.com.

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FLIR Exx-Series

ADVANCED THERMAL IMAGING CAMERAS

SPECIFICATIONS

Model	E54	E76	E86	E96
IR resolution	320 × 240 pixels	320 × 240 pixels	464 × 348 pixels	640 × 480 pixels
Resolution with UltraMax [®] enhancement	—	307,200 pixels	645,888 pixels	1.2 megapixels
MSX [®] image enhancement	Yes: details from visual camera add depth and perspective			
Built-in visual camera	5 MP, fixed focus, with built in LED light			
Thermal sensitivity	<40 mK @ 30°C (86°F)	<30 mK @ 30°C (86°F), 42° lens	<30 mK @ 30°C (86°F), 42° lens	<30 mK @ 30°C (86°F), 42° lens
Temperature range	-20°C to 120°C (-4°F to 248°F); 0°C to 650°C (32°F to 1202°F)	-20°C to 120°C (-4°F to 248°F); 0°C to 650°C (32°F to 1202°F)	-20°C to 120°C (-4°F to 248°F); 0°C to 650°C (32°F to 1202°F); 300°C to 1500°C (572°F to 2732°F)	-20°C to 120°C (-4°F to 248°F); 0°C to 650°C (32°F to 1202°F); 300°C to 1500°C (572°F to 2732°F)
Optional temperature range	—	300°C to 1000°C (572°F to 1832°F)		
Accuracy	±2°C (±3.6°F) or ±2% of the reading			
Focus modes	Manual	Continuous laser distance meter (LDM), one-shot LDM, one-shot contrast, manual	Continuous LDM, one-shot LDM, one-shot contrast, manual	Continuous LDM, one-shot LDM, one-shot contrast, manual
Digital zoom	1–4x continuous			1–8x continuous
Measurement tools	3 spotmeters in live mode, 1 area meter in live mode	3 spotmeters in live mode, 3 area meters in live mode		
Measurement presets	None, center spot, hot spot, cold spot, 3 spots, hot spot-spot*	None, center spot, hot spot, cold spot, User Presets 1&2		
Available lenses	None (fixed lens)	14°, 24°, 42°, macro (2x)		
Lens identification	—	Automatic (FLIR AutoCal™)		
1-Touch Level/Span	Yes: automatic contrast enhancement			
Laser pointer	Yes			
Laser distance meter	—	Yes		
Area measurement information	—	—	Yes	
On-camera routing software	FLIR Inspection Route™ — enabled			
On-camera report building	Voice annotation and GPS tagging to images and video; on-screen text; sketch on infrared images from touchscreen			
FLIR software integration	FLIR Thermal Studio Starter, FLIR Thermal Studio, FLIR Thermal Studio Pro, FLIR Research Studio			
Radiometric JPEG	Yes			
IR, radiometric, visual video recording	Yes			
IR, radiometric, visual video streaming	Yes, over UVC (radiometric, non-radiometric, visual) and Wi-Fi (non-radiometric, visual)			
Communication modes	USB 2.0, Bluetooth, Wi-Fi, DisplayPort			
METERLiNK [®]	Yes			
Display	640 × 480 pixels (VGA) Dragontrail [®] touchscreen			
Drop-testing	2 m (6.6 ft)			
Battery operation time	>2.5 hours, typical use			

*Hot spot to center spot Delta measurement

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



FLIR AutoCal™ Lenses

FLIR E76, E86, and E96 camera are compatible with all our interchangeable AutoCal lenses. The camera automatically recognizes when a new lens is attached and launches a wizard to begin auto-calibrating the camera with the lens—no need to send the camera in for service. This helps ensure the camera always produces high-quality images and precise thermal measurements.



WHAT LENS DO YOU NEED?

14°, 29 mm lens: this telephoto lens has a narrow field of view for precise focus and crisp imaging of distant targets.

24°, 17 mm lens: often considered the “standard” lens, the 24° × 18° field of view allows users to remain a safe distance from energized equipment (e.g. 3 m/6.6 ft) while still obtaining a crisp focus on smaller targets.

42°, 10 mm lens: this wide-angle lens captures the largest field of view for imaging buildings, roofs, or other areas where it’s important to gather the most information in a single image.

THE Exx-SERIES and FLIR THERMAL STUDIO PRO

EMPOWERED WITH REPORTING SOLUTIONS TO STREAMLINE INSPECTIONS

Exx-Series cameras are the first FLIR models to come with our exclusive Inspection Route Camera Option automatically enabled in the camera.

Designed for thermographers who regularly inspect large numbers of objects over the course of a day, FLIR Inspection Route guides the user along a pre-defined route of inspection points so they can collect images and data in a structured manner.

The route begins in FLIR Thermal Studio Pro software, where users build their plan using the Route Creator plugin. They can include as many inspection targets as needed and organize them for maximum efficiency. Once they export the completed route to the Exx camera, they’re ready to begin the day.

The predefined route guides the user’s on-site movement to each inspection asset, automatically collecting and organizing saved images for a seamless import into FLIR Thermal Studio Pro. By ensuring that nothing is missed and that all inspection results are organized from start, the suite of FLIR inspection software speeds up inspections, improves organization, and simplifies reporting.

Learn more about [FLIR Thermal Studio Pro](#), the [FLIR Route Creator Plug-in](#), and the [FLIR Inspection Route Camera Option](#) at [FLIR.com](#).



www.flir.com/exx-series



FLIR THERMAL STUDIO SUITE

Software	Thermal Studio Starter	Thermal Studio Standard	Thermal Studio Pro
Subscription	Free	visit FLIR.com/Thermal-Studio-Suite for pricing	
File formats			
Image files	JPEGs, radiometric JPEGs		
Video files	MP4, CSQ, SEQ		
Export formats	PDF, XPS, JPG, ATR, HTML	PDF, XPS, JPG, ATR, CSV, HTML	PDF, XPS, JPG, ATR, CSV, AVI, HTML
Radiometric analysis			
View and edit radiometric images	Yes		
Spot, Box, Line, Ellipse/Circle	Yes		
Delta	—	Yes	
Formulas	—	Yes	
Measurement alarms	—	Humidity, Insulation	
Magic wand, Polygon, Polyline	—	—	Yes
Reporting			
Reporting with pre-defined templates	Yes		
Rapid Report	—	Yes	
Custom report templates	—	Up to five custom templates	Unlimited custom templates
Custom reporting with editor	—	Yes	
Custom logo in image	—	—	Yes
Manage routes with FLIR Route Creator Plugin*	—	—	Yes
Presentation features			
Image presentation modes	MSX®, thermal only, thermal fusion, blending, picture-in-picture, visual only		
Panorama	—	—	Yes
Image controls	MSX alignment, 90° rotation		MSX alignment, free rotation, resize, crop
Image annotations	Text, Voice		
Color distribution	Histogram equalization, signal linear, temperature linear	Histogram equalization, signal linear, temperature linear, Digital Detail Enhancement	
Custom image overlay	—	Yes	
Custom color palettes	—	—	Yes
Gas visualization	—	—	High sensitivity mode (HSM) and pixel binning
Streaming and recording			
View non-radiometric video	Yes		
Record non-radiometric video	Yes		
View radiometric video	Yes		
Edit radiometric video (SEQ and CSQ)	—	—	Yes
Record radiometric video	—	—	Yes
Segment video capabilities	—	—	Yes
Dual streaming (visual & IR)	—	—	Yes
Multi-image editing/batch processing			
Scale & units	—	Yes	
Image presentation	—	Palette, fusion, UltraMax®	Palette, fusion, fusion alignment, UltraMax, isotherm, alarm, clear isotherms, zoom factor, notes, color distribution, sketch, rotate
Measurements	—	Spots, clear all	Spots, Ellipses, Rectangles, Lines, Delta, clear all
Parameters	—	Emissivity, distance	Emissivity, reflected temperature, reference temperature, distance, atmospheric temperature, external optics temperature, external optics transmission, relative humidity
Output	—	Radiometric JPG	Radiometric JPG, JPG, CSV, AVI, Map, Graphy
Plugin support			
FLIR Route Creator (*sold separately)	—	—	Yes
Camera support			
Compatible FLIR products	All cameras that generate images in radiometric JPEG format (including A-, B-, C-, K-, T-, E-, GF-, i-, P6- and FLIR One series)		
Compatible cameras with embedded FLIR Inspection Route	FLIR E54, E76, E86, E96, GF77 and any T-Series camera purchased after October 8, 2020		
System requirements	Windows 8 or later / Thermal Studio 1.7 and later versions supports 64-bit only / RAM: Minimum 4 GB / Disk space: Minimum 250 MB		

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



Fast, Efficient Thermal Analysis and Reporting

THE NEW FLIR THERMAL STUDIO SUITE

Evaluating, editing, organizing, and reporting thermal images are all critical steps in any thermal survey. Being able to perform these tasks quickly and efficiently allows inspectors to spend more time in the field and less time at their desks. The FLIR Thermal Studio software suite makes this happen.

This state-of-the-art analysis software is designed to help users manage thousands of thermal images and videos and quickly produce professional reports. Compatible with files from handheld thermal cameras, unmanned aircraft systems (UAS), and optical gas imaging (OGI) cameras, this software offers the features needed to streamline workflow and increase productivity.

THREE TIERS, ONE POWERFUL SOFTWARE

FLIR offers three software tiers providing the capabilities users need at a range of affordable prices.

FLIR Thermal Studio Starter

- Free perpetual license
- View and edit radiometric images
- Quick reporting with pre-defined templates

FLIR Thermal Studio Standard

- 1-year subscription
- Customize reports
- Advanced measurement and image analysis
- Basic multi-image editing (batch processing)

FLIR Thermal Studio Pro

- 1-year subscription
- Full range of advanced analysis and reporting functionality
- View, stream, and record radiometric video (includes dual streaming)
- Batch processing with all image and measurement controls
- Compatible with FLIR Route Creator plugin (optional) for building and downloading inspection plans



FLIR Route Creator



YOUR PATH TO EFFICIENT, BETTER ORGANIZED INSPECTIONS

Complete your inspections efficiently and reduce reporting time by 50% with the [FLIR Route Creator](#) plugin for FLIR Thermal Studio Pro. This plugin allows you to build an inspection path for every location survey that you can either print or download and run from a thermal camera that has FLIR Inspection Route enabled.* Inspection Route directs you through the pre-planned survey so you can acquire temperature data and thermal images in a logical sequence. This helps automate data management and allows you to easily maintain historical records for improved predictive maintenance.

Once you've completed an inspection, you can upload images, data, and notes directly into your report templates, cutting your reporting time in half.

*Exx-Series and T-Series cameras purchased prior to October 8, 2020 will require the addition of [FLIR Inspection Route](#). Camera option is included in E54, E76, E86, and E96 models.

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