

E85

ELECTRO-MECHANICAL



ADVANCED THERMAL IMAGING

REIMAGINED FROM THE HANDLE UP

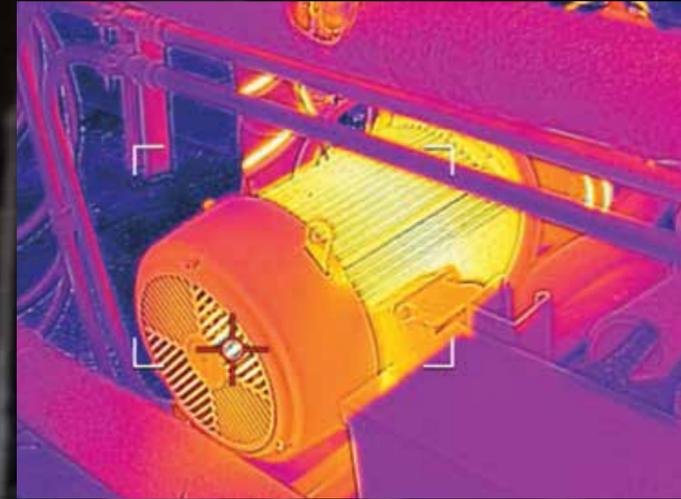
FLIR Exx-Series[™]
E53 | E75 | E85 | E95



DESIGNED AND ENGINEERED
ASSEMBLED IN ESTONIA. THIS
21 CFR 101.10 AND 101.111 ETC
PURSUANT TO LASER CLASSIFICATION



BRILLIANCE AT WORK



FLIR redesigned the Exx-Series from the handle up to deliver the best performance, resolution, and sensitivity of any pistol-grip handheld thermal camera.

The new Exx-Series cameras are packed with the features you need to quickly troubleshoot electrical distribution and mechanical systems, so you can avoid equipment failures, increase plant safety, and maximize up-time.

FLIR Exx-Series cameras now offer:

- Interchangeable, auto-calibrating lenses*
- Laser distance meter for measurement information and crisp, accurate focus*
- Our best MSX® enhancement
- UltraMax® processing for 4x pixel resolution*
- A larger, 4" display that's 33% brighter
- A responsive new interface
- Improved organization and reporting options

* E75, E85, E95 only.

UNPARALLELED PERFORMANCE



See Greater Detail

- Vibrant LCD is 33% brighter than earlier models
- Large 4" display with 160° viewing angle
- Up to 464 x 348 true native IR resolution
- Improved FLIR MSX® image enhancement

Quantify Potential Problems

- Accurate temperature readings on hot spots
- Wide temperature ranges, up to 1500°C
- Sensitivity to detect minute temperature differences

Focus Fast & True

- Laser-assisted autofocus responds quickly, improves measurement accuracy*
- Superior spot-size performance for measurement of small, distant targets
- Interchangeable lenses provide coverage for any target, any scene*



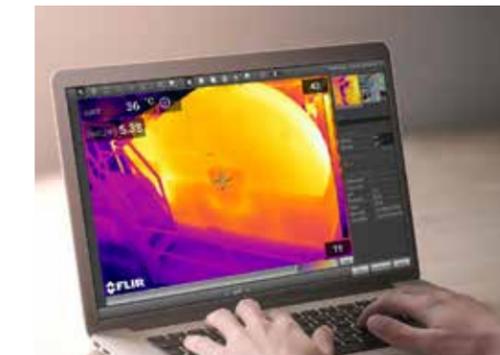
The new Exx-Series is packed with the high performance features you need to quickly find and report hidden hot spots: a bright, bold new screen; razor-sharp lenses; and a rapid-response user interface.

Navigate Screens Easier

- Quick response capacitive touchscreen
- Updated GUI with improved flow and feedback
- Logical navigation on screen and in menus

Report Problems Quickly

- Wi-Fi connects camera to mobile devices or in-plant networks
- Image annotation through voice, text, on-screen sketch, GPS tagging, and compass
- New folder and naming structure makes finding images easier
- Enhanced image analysis and reporting through included FLIR Tools+ software



* E75, E85, E95 only.

Mic for voice annotation

Speaker plays back voice annotation

Vibrant, 4" optically-bonded PCAP touchscreen

Scratch-resistant Dragontrail™ cover glass

Li-ion battery for extended use times

Ergonomic new design for our most comfortable grip

Laser provides distance measurement and precise autofocus*

Laser pointer provides visual guidance

Interchangeable 24°, 42°, and 14° telephoto lenses*

Bright LED work lights improve image clarity in dim areas

5 MP digital camera now closer to thermal detector for superior MSX® enhancements

Separate Autofocus and Image Recording buttons*

FLIR Exx-Series™
E53 | E75 | E85 | E95

HARD-WORKING DESIGN, FOR HARD-WORKING PROS

This sleek new design isn't just window dressing. From the rubberized, water-tight chassis to the scratch-resistant Dragontrail™ cover glass LCD, the new Exx-Series is made for your tough work environment.

* E75, E85, E95 only.

EXPANDABLE AND MODULAR



The Best Lenses Need the Best Autofocus*

FLIR took its cue from the digital camera industry when re-engineering the Exx-Series focus system. Whether you choose autofocus or continuous focus, the camera's precise laser-assisted focus and FLIR's innovative lenses ensure you get crisp results, for the most accurate temperature readings.

Multiple Targets, One Solution

Not every target is large enough or close enough for proper measurement with a single lens. That's why FLIR designed the new Exx-Series with interchangeable* 24°, 42°, and 14° lenses – so you can use the same camera for every target you survey. The camera auto-calibrates with each new lens to ensure it produces high-quality images and precise thermal measurements.

Tailored to Your Systems

The new Exx-Series cameras produce standard radiometric JPEGs that can be opened and viewed without proprietary software. These images can be viewed and edited in FLIR Tools, and are supported by FLIR's Software Development Kit (ATLAS SDK). This allows companies to use their own Computerized Maintenance Monitoring Systems (CMMS) and still support read-out of thermal measurements, METERLINK® data, GPS, compass, and other important parameters embedded within the image.

* E75, E85, E95 only.

TECHNICAL SPECIFICATIONS

Features By Camera	E53	E75	E85	E95
IR Resolution	240 x 180 (43,200 pixels)	320 x 240 (76,800 pixels)	384 x 288 (110,592 pixels)	464 x 348 (161,472 pixels)
UltraMax®	—	307,200 pixels	442,368 pixels	645,888 pixels
Object Temperature Range	-20°C to 120°C (-4°F to 248°F) 0°C to 650°C (32°F to 1200°F)	-20°C to 120°C (-4°F to 248°F) 0°C to 650°C (32°F to 1200°F) Optional 300°C to 1000°C (572°F to 1830°F)	-20°C to 120°C (-4°F to 248°F) 0°C to 650°C (32°F to 1200°F) 300°C to 1200°C (572°F to 2192°F)	-20°C to 120°C (-4°F to 248°F) 0°C to 650°C (32°F to 1200°F) 300°C to 1500°C (572°F to 2732°F)
Focus	Manual	Continuous, one-shot laser distance meter (LDM), one-shot contrast, manual	Continuous, one-shot laser distance meter (LDM), one-shot contrast, manual	Continuous, one-shot laser distance meter (LDM), one-shot contrast, manual
Field of View (FOV)	24° x 18°	42° x 32° (10 mm lens), 24° x 18° (18 mm lens), 14° x 10° (29 mm lens)	42° x 32° (10 mm lens), 24° x 18° (18 mm lens), 14° x 10° (29 mm lens)	42° x 32° (10 mm lens), 24° x 18° (18 mm lens), 14° x 10° (29 mm lens)
Lens Identification	—	Automatic	Automatic	Automatic
Time-lapse (Infrared)	—	—	—	10 sec to 24 hours
Laser Area Measurement	—	—	Yes	Yes
Laser Distance Measurement	—	Yes, on-screen	Yes, on-screen	Yes, on-screen
Measurement Presets	No measurement, center spot, hot spot, cold spot, 3 spots, hot spot-spot*	No measurement, center spot, hot spot, cold spot, User Preset 1, User Preset 2	No measurement, center spot, hot spot, cold spot, User Preset 1, User Preset 2	No measurement, center spot, hot spot, cold spot, User Preset 1, User Preset 2
Spotmeter	3 in live mode	1 in live mode	3 in live mode	3 in live mode
Area	1 in live mode	1 in live mode	3 in live mode	3 in live mode
Picture-in-Picture	Centered infrared area on the visual image	Resizable and movable	Resizable and movable	Resizable and movable

*Hot spot to center spot Delta measurement

Common Features	
Detector Type and Pitch	Uncooled microbolometer, 17 µm
Thermal Sensitivity/NETD	<0.04°C @ 30°C (86°F), 24° lens
Spectral Range	7.5 – 14.0 µm
Image Frequency	30 Hz
F-Number	f/1.3, 24° lens
Digital Zoom	1-4x continuous
Image Presentation and Modes	
Display	4", 640 x 480 pixel touch screen LCD with auto-rotation
Digital Camera	5 MP, 53° x 41° FOV
Color Palettes	Iron, Gray, Rainbow, Arctic, Lava, Rainbow HC
Image Modes	Infrared, visual, MSX®, Picture-in-Picture
MSX®	Embosses visual details on full resolution thermal image
Measurement and Analysis	
Accuracy	±2°C (±3.6°F) or ±2% of reading for ambient temperature 15°C to 35°C (59°F to 95°F) and object temperature above 0°C (32°F)
Alarms	Moisture, insulation, and measurement
Color Alarm (Isotherm)	Above/below/interval/condensation/insulation
Compass, GPS	Yes; automatic GPS image tagging
METERLINK®	Yes; several readings
Laser Pointer	Yes; dedicated button
Image Storage	
Storage Media	Removable SD card (8 GB)
Image File Format	Standard JPEG with measurement data included
Video Recording and Streaming	
Radiometric IR Video Recording	Real-time radiometric recording (.cseq)
Non-Radiometric IR or Visual Video	H.264 to memory card
Radiometric IR Video Streaming	Yes, over UVC or Wi-Fi
Non-Radiometric IR Video Streaming	H.264 or MPEG-4 over Wi-Fi; MJPEG over UVC or Wi-Fi
Communication Interfaces	USB 2.0, Bluetooth, Wi-Fi, DisplayPort
Video Out	DisplayPort over USB Type-C
Additional Data	
Battery Type	Li-ion battery, charged in camera or on separate charger
Battery Operating Time	Approx. 2.5 hours at 25°C (77°F) ambient temperature and typical use
Operating Temperature Range	-15°C to 50°C (5°F to 122°F)
Storage Temperature Range	-40°C to 70°C (-40°F to 158°F)
Shock/Vibration/Encapsulation; Safety	25 g / IEC 60068-2-27, 2 g / IEC 60068-2-6, IP 54 / IEC 60529; EN/UL/CSA/PSE 60950-1
Weight/Dimensions	1 kg (2.2 lbs), 27.8 x 11.6 x 11.3 cm (11.0 x 4.6 x 4.4 in)
Box Contents	
	Infrared camera with lens, battery (2 ea), battery charger, front protection, straps (hand, wrist), hard transport case, lanyards, lens caps, lens cleaning cloth, power supplies, 8 GB SD card, Torx wrench, cables (USB 2.0 A to USB Type-C, USB Type-C to USB Type-C, USB Type-C to HDMI)



The Infrared Training Center

The greater your knowledge about thermal imaging, the greater the dividends you'll realize for your company and your career. That's why the Infrared Training Center (ITC) offers classes for practically every application, from free online courses to advanced training that can certify you as a thermography expert, qualifying you to take a leadership role in your internal IR program.

ITC classes include:

- Thermography Fundamentals Training
- IR Electrical Inspection
- IR Mechanical Inspection

Thermography Certification Training

Level I certifies that you know how a thermal imager works and how to use it. Level II cranks your credibility up a notch with more in-depth concepts and intensive labs. Level III asserts that you have knowledge and skills to administer your company's thermography program. These certifications offer strong validation to support the work you do as a thermographer.

Mobile Training Units and on-site training at your facility are encouraged if you would like to certify a group of 10 or more. For a complete list and schedule of courses and more information, visit www.infraredtraining.com or call 1.866.872.4647.

Exx-Series cameras are backed by FLIR's industry-leading warranty

2 years: Full protection, parts, labor

5 years: Battery

10 years: Detector



LEARN MORE ABOUT EXX-SERIES CAMERAS AT WWW.FLIR.COM/EXX-ELECTRICAL

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