

FLIR E96 24° + 14° & 42°



Imaging and optical data	
Infrared resolution	640 × 480 pixels
UltraMax (super-resolution)	Yes
NETD	• <30 mK, 42° @ +30°C (+86°F) • <40 mK, 24° @ +30°C (+86°F) • <50 mK, 14° @ +30°C (+86°F)
Field of view	• 42° × 32° • 24° × 18° • 14° × 10°
Minimum focus distance	• 0.15 m (0.49 ft.), 42° • 0.15 m (0.49 ft.), 24° • 1.0 m (3.28 ft.), 14°
Minimum focus distance with MSX	• 0.65 m (2.13 ft.), 42° • 0.5 m (1.64 ft.), 24° • 1.0 m (3.28 ft.), 14°
Focal length	• 10 mm (0.39 in.), 42° • 17 mm (0.67 in.), 24° • 29 mm (1.41 in.), 14°
Spatial resolution (IFOV)	• 1.20 mrad/pixel, 42° • 0.66 mrad/pixel, 24° • 0.38 mrad/pixel, 14°
Lens identification	Automatic

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Imaging and optical data	
f number	• 1.1, 42° • 1.3, 24° • 1.5, 14°
Image frequency	30 Hz
Focus	• Continuous LDM • One-shot LDM • One-shot contrast • Manual
Field of view match	Yes
Digital zoom	1–8x continuous
Detector data	
Focal plane array/spectral range	Uncooled microbolometer/7.5–14 µm
Detector pitch	12 µm
Image presentation	
Resolution	640 × 480 pixels (VGA)
Surface brightness (cd/m²)	400
Screen size	4 in.
Viewing angle	80°
Color depth (bits)	24
Aspect ratio	4:3
Auto-rotation	Yes
Touchscreen	Optically bonded PCAP
Display technology	IPS
Cover glass material	Dragontrail®
Programmable buttons	1
Viewfinder	No
Image adjustment	• Automatic • Automatic maximum • Automatic minimum • Manual
Image presentation modes	
Infrared image	Yes
Visual image	Yes
Thermal fusion	No
MSX	Yes
Picture in Picture	Resizable and movable
Gallery	Yes

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Measurement	
Camera temperature range	• -20 to 120°C (-4 to 248°F) • 0 to 650°C (32 to 1202°F) • 300 to 1500°C (572 to 2732°F)
Object temperature range and accuracy (for ambient temp. 15 to 35°C (59 to 95°F))	• Range -20 to 120°C (-4 to 248°F): ◦ -20 to 100°C (-4 to 212°F): ±2°C (±3.6°F) ◦ 100 to 120°C (212 to 248°F): ±2% • Range 0 to 650°C (32 to 1202°F): ◦ 0 to 100°C (32 to 212°F): ±2°C (±3.6°F) ◦ 100 to 650°C (212 to 1202°F): ±2% • Range 300 to 1500°C (572 to 2732°F): ±2%
Inspection mode	
FLIR Inspection route	Enabled in the camera
Measurement analysis	
Spotmeter	3 in live mode
Area	3 in live mode
Automatic hot/cold detection	Auto-maximum/minimum markers within area
Measurement presets	• No measurements • Center spot • Hot spot • Cold spot • User preset 1 • User preset 2
Difference temperature	Yes
Reference temperature	Yes
Emissivity correction	Yes: variable from 0.01 to 1.0 or selected from materials list
Measurement corrections	Yes
External optics/windows correction	Yes
Alarm	
Color alarm (isotherm)	• Above • Below • Interval • Condensation (moisture/humidity/dewpoint) • Insulation
Measurement function alarm	Audible/visual alarms (above/below) on any selected measurement function
Set-up	
Color palettes	• Arctic • White hot • Black hot • Iron • Lava • Rainbow • Rainbow HC
Setup commands	Local adaptation of units, language, date and time formats
Languages	21
Service functions	
Camera software update	Using USB cable or SD card

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Storage of images	
Storage media	- Removable memory: SD card (8 GB) - FLIR Ignite Cloud services (with Wi-Fi)
Time lapse (periodic image storage)	10 seconds to 24 hours (infrared)
Remote control operation	Using USB cable or Wi-Fi
Image file format	Standard JPEG, measurement data included. Infrared-only mode
Image annotations	
Voice	60 seconds built-in microphone and speaker (and via Bluetooth) on still images and video
Text	Text from predefined list or soft keyboard on touchscreen
Visual image annotation	Yes
Image sketch	Yes: on infrared images only
Sketch	From touchscreen
METERLiNK	Wireless connection (Bluetooth) to: FLIR meters with METERLiNK
Compass	Yes
Laser distance meter information	Yes
Area measurement information	Yes
GPS	Yes: location data automatically added to every still image and the first frame in video from built-in GPS
Video recording in camera	
Radiometric infrared-video recording	RTRR (.csq)
Non-radiometric infrared-video recording	H.264 to memory card
Visual video recording	H.264 to memory card
Video streaming	
Radiometric infrared-video streaming (compressed)	Over UVC
Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture)	- H.264 (AVC) over RTSP (Wi-Fi) - MPEG4 over RTSP (Wi-Fi) - MJPEG over UVC and RTSP (Wi-Fi)
Visual video streaming	Yes
Digital camera	
Resolution	5 MP with LED light
Focus	Fixed
Field of view	53° × 41°
Video lamp	Built-in LED light
Laser pointer	
Laser alignment	Position is automatically displayed on the infrared image
Laser distance meter	Activated by a dedicated button
Laser	Class 2, 0.05–40 m (1.6–131 ft.) ±1% of measured distance

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Data communication interfaces	
Interfaces	USB 2.0, Bluetooth, Wi-Fi, DisplayPort
METERLiNK/Bluetooth	Communication with headset and external sensors
Wi-Fi	Peer to peer (<i>ad hoc</i>) or infrastructure (network)
Audio	Microphone and speaker for voice annotation of images
USB	USB Type-C: data transfer/video/power
USB standard	USB 2.0 High Speed
Video out	DisplayPort
Video connector type	DisplayPort over USB Type-C
Cloud services	FLIR Ignite Cloud services
Radio	
Operating frequency	Bluetooth + EDR/LE: 2402–2480 MHz WLAN 2.4 GHz: 2412–2462 MHz WLAN 5 GHz: 5150–5350 MHz (DFS: only slave mode) Note that frequency band 5150–5350 MHz is for indoor use only, see national regulations.
RF output (EIRP)	Bluetooth + EDR/LE: < 10 dBm WLAN: < 17 dBm
Antenna	Integrated PIFA antenna (gain: maximum 1.4 dBi)
Power system	
Battery type	Rechargeable Li-ion battery
Battery voltage	3.6 V
Battery operating time	> 2.5 hours at 25°C (68°F) and typical use
Charging system	In camera (AC adapter or 12 V from a vehicle) or two-bay charger
Charging time (using two-bay charger)	2.5 hours to 90% capacity with charging status indicated by LEDs
Charging temperature	0°C to +45°C (+32°F to +113°F), except for the Korean market: +10°C to +45°C (+50°F to +113°F)
External power operation	AC adapter 90–260 V AC, 50/60 Hz, or 12 V from a vehicle (cable with standard plug—optional)
Power management	Automatic shut-down and sleep mode
Battery documents	For documents like MSDS and UN38.3 test reports/summaries, see: https://support.flir.com/resources/msds
Environmental data	
Operating temperature range	–15 to +50°C (5–122°F)
Storage temperature range	–40 to +70°C (–40 to +158°F)
Humidity (operating and storage)	IEC 60068-2-30/24 hours/95% relative humidity 25–40°C (77–104°F)/two cycles
EMC	- ETSI EN 301 489-1 (radio) - ETSI EN 301 489-17 - EN 61000-6-2 (immunity) - EN 61000-6-3 (emission) - FCC 47 CFR part 15 B, class B (emission)

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Environmental data	
Radio spectrum	- ETSI EN 300 328 - ETSI EN 301 893 - FCC 47 CFR part 15 C - FCC 47 CFR part 15 E
Encapsulation	IP 54 (IEC 60529)
Shock	25g (IEC 60068-2-27)
Vibration	2g (IEC 60068-2-6)
Drop	Designed for 2 m (6.6 ft.)
Safety	Camera: - IEC/EN 60950-1, IEC/EN 62368-1 Power supply: - IEC/EN 62368-1 - CSA/UL/KC/SAA/PSE 60950-1
Declaration of conformity	See: https://support.flir.com/resources/DoC
Physical data	
Weight (including battery)	1 kg (2.2 lb.)
Size (L × W × H)	278.4 × 116.1 × 113.1 mm (11.0 × 4.6 × 4.4 in.)
Battery weight	140 g (4.9 oz.)
Battery size (L × W × H)	150 × 46 × 55 mm (5.9 × 1.8 × 2.2 in.)
Tripod mounting	UNC ¼"-20
Housing material	PCABS with TPE, magnesium
Color	Black
Warranty and service	
Warranty	http://www.flir.com/warranty/

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Shipping information	
Packaging, type	Cardboard box
Packaging, contents	• Accessory Box I: ◦ Power supply for battery charger ◦ Power supply, 15 W/3 A ◦ Printed documentation ◦ SD card (8 GB) ◦ USB 2.0 A to USB Type-C cable, 1.0 m ◦ USB Type-C to HDMI adapter, standard specification UH311 ◦ USB Type-C to USB Type-C cable (USB 2.0 standard), 1.0 m • Accessory box II: ◦ Accessory box III: – Front protection fastener – Hand strap bracket, left – Hand strap bracket, right – Screws – Torx T10 wrench ◦ Carabiner hook ◦ Front protection ◦ Hand strap ◦ Lanyard strap, camera ◦ Lens cap strap ◦ Wrist strap • Battery (2 ea) • Battery charger • Extra lens, 14° • Extra lens, 42° • FLIR Thermal Studio Starter • Hard transport case • Infrared camera with lens • Lens cap, front • Lens cap, front and rear (only for extra lenses)
Packaging, weight	6.4 kg (14.1 lb.)
Packaging, size	500 × 190 × 370 mm (19.7 × 7.5 × 14.6 in.)
EAN-13	4743254004573
UPC-12	845188022303
Country of origin	Estonia

Supplies and accessories:

- T131171ACC; Remote operation button
- T300030; Option, No radio
- T911997; Tripod
- T911998; HDMI 2-port video splitter
- T300369; Mounting kit (FLIR T5xx, T8xx, Exx)
- T300493ACC; Industrial protective lens window
- T850111; Option, Dual streaming
- T130337ACC; Calibration target
- T199330ACC; Battery
- T199346ACC; Hard transport case for FLIR Exx series
- T199425ACC; Battery charger
- T199557ACC; Accessory Box II
- T911630ACC; Power supply for camera, 15 W/3 A
- T911633ACC; Power supply for battery charger
- T911689ACC; Pouch for FLIR E-series
- T911705ACC; USB Type-C to USB Type-C cable (USB 2.0 standard), 1.0 m
- T911706ACC; Car adapter 12 V
- T911845ACC; USB Type-C to HDMI and PD adapter

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- T911846ACC; USB 2.0 A to USB Type-C with Power supply
- T911940ACC; USB 2.0 A to USB Type-C cable, 1.0 m
- T300437ACC; Lens case
- T199589; IR lens, f=17 mm (24°) with case
- T199588; IR lens, f=29 mm (14°) with case
- T199590; IR lens, f=10 mm (42°) with case
- T197771ACC; Bluetooth Headset
- T300244; FLIR Route Creator Plugin for FLIR Thermal Studio Pro, 1 Year Subscription
- T300439; FLIR Route Creator Plugin for FLIR Thermal Studio Pro, Perpetual license
- T300342; FLIR Screen-EST, Perpetual license
- T300243; FLIR Thermal Studio Pro, 1 Year Subscription
- T300083; FLIR Thermal Studio Pro, Perpetual license
- T300341; FLIR Thermal Studio Standard, 1 Year Subscription
- T300258; FLIR Thermal Studio Standard, Perpetual license
- 4232535; FLIR Research Studio, Professional Edition - 1 Year Subscription (online activation)
- 4232556; FLIR Research Studio, Professional Edition - Perpetual License (online activation)
- 4232590; FLIR Research Studio, Professional Edition - Perpetual License (USB dongle)
- 4220499; FLIR Research Studio, Standard Edition - 1 Year Subscription (online activation)
- 4220500; FLIR Research Studio, Standard Edition - Perpetual License (online activation)
- 4220646; FLIR Research Studio, Standard Edition - Perpetual License (USB dongle)
- T198696; FLIR ResearchIR Max 4 (hardware sec. dev.)
- T199013; FLIR ResearchIR Max 4 (printed license key)
- T199043; FLIR ResearchIR Max 4 Upgrade (printed license key)
- 4232591; FLIR ResearchIR to Research Studio, Professional Edition - 1 Year License Upgrade

