

P/N: 89002-0101

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Document identity

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Website

http://www.flir.com

Customer support

http://support.flir.com

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Imaging and optical dataInfrared resolution640 × 480 pixelsUltraMax (super-resolution)1YesNETD<40 mK @ 30°C (86°F)Field of view24° × 18°Minimum focus distance• 0.15 m (0.49 ft) • Macro mode 50 µm as optionMinimum focus distance with MSX0.5 m (1.64 ft)Focal length17 mm (0.67 in)Spatial resolution (IFOV)0.66 mrad/pixelAvailable extra lenses• 42° (AutoCal) • 14° (AutoCal) • 6° (service calibration required)Lens identificationAutomaticf number1.3Image frequency30 HzFocus• Continuous LDM • One-shot LDM • One-shot CDM • One-shot contrast • ManualField of view matchYesDigital zoom1-8× continuousFocal plane array/spectral rangeUncooled microbolometer/7.5–14 µmDetector dataInage presentationResolution640 × 480 pixels (VGA)Surface brightness (cd/m²)400			
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Available extra lenses42° (AutoCal) • 14° (AutoCal) • 6° (service calibration required)Lens identificationAutomaticf number1.3Image frequency30 HzFocus• Continuous LDM • One-shot LDM • One-shot contrast • ManualField of view matchYesDigital zoom1–8× continuousPocus protector data1Focus protector pitch12 µmImage presentation640 × 480 pixels (VGA)	Focal length	17 mm (0.67 in)	
• 42° (AutoCal) • 14° (AutoCal) • 6° (service calibration required)Lens identificationAutomaticf number1.3Image frequency30 HzFocus• Continuous LDM • One-shot LDM • One-shot contrast • ManualField of view matchYesDigital zoom1-8× continuousDetector dataFocus pitch12 µmImage presentation6× 480 pixels (VGA)	Spatial resolution (IFOV)	0.66 mrad/pixel	
f number1.3Image frequency30 HzFocus• Continuous LDM • One-shot LDM • One-shot contrast • ManualField of view matchYesDigital zoom1-8× continuousDetector dataFocal plane array/spectral rangeUncooled microbolometer/7.5–14 µmDetector pitch12 µmImage presentationResolution640 × 480 pixels (VGA)	Available extra lenses	• 14° (AutoCal)	
Image frequency 30 Hz Focus • Continuous LDM Focus • One-shot LDM • One-shot contrast • Manual Field of view match Yes Digital zoom 1-8× continuous Detector data Uncooled microbolometer/7.5–14 µm Detector pitch 12 µm Image presentation 640 × 480 pixels (VGA)	Lens identification	Automatic	
Focus• Continuous LDM • One-shot LDM • One-shot contrast • ManualField of view matchYesDigital zoom1–8× continuousDetector dataFocal plane array/spectral rangeUncooled microbolometer/7.5–14 μmDetector pitch12 μmImage presentationResolution640 × 480 pixels (VGA)	f number	1.3	
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Digital zoom 1-8× 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)	Focus	One-shot LDMOne-shot contrast	
Detector data Uncooled microbolometer/7.5–14 μm Focal plane array/spectral range Uncooled microbolometer/7.5–14 μm Detector pitch 12 μm Image presentation 640 × 480 pixels (VGA)	Field of view match	Yes	
Focal plane array/spectral range Uncooled microbolometer/7.5–14 μm Detector pitch 12 μm Image presentation 640 × 480 pixels (VGA)	Digital zoom	1–8× continuous	
Detector pitch 12 μm Image presentation 640 × 480 pixels (VGA)	Detector data		
Image presentation Resolution 640 × 480 pixels (VGA)	Focal plane array/spectral range	Uncooled microbolometer/7.5–14 µm	
Resolution 640 × 480 pixels (VGA)	Detector pitch	12 μm	
	Image presentation		
Surface brightness (cd/m ²) 400	Resolution	640 × 480 pixels (VGA)	
	Surface brightness (cd/m ²)	400	

1. Not supported when using macro.





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Image presentation		
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	2	
Viewfinder	No	
Image adjustment	 Automatic Automatic maximum Automatic minimum Manual 	
Image presentation modes		
Infrared image	Yes	
Visual image	Yes	
MSX	Yes	
Picture in picture	Resizable and movable	
Gallery	Yes	
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	Automatic 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	





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Measurement analysis			
Emissivity correction	Vac variable from 0.01 to 1.0 or calcated from		
	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		
Storage of images			
Storage media	Removable memory: SD card		
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 with 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 only		
Sketch	From touchscreen		
METERLINK	Wireless connection (Bluetooth) to:		
	FLIR meters with METERLINK		
Laser distance meter information	Yes		
Area measurement information	Yes		
GPS	Location data automatically added to every still image and first frame in video from built-in GPS		





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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 dedicated button		
Laser	Class 2, 0.05–40 m (0.16–131 ft) ±1% of measured distance		
Data communication interfaces			
Interfaces	USB 2.0, Bluetooth, Wi-Fi, DisplayPort		
METERLiNK/Bluetooth	Communication with headset and external sensors		
Wi-Fi	Peer to peer (ad hoc) 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		
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		



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Power system		
Battery operating time	> 4 hours at 25°C (77°F) with typical use	
Charging system	In camera (AC adapter or 12 V from a vehicle) or two-bay charger	
Charging time (using two-bay charger)	3.5 h to 90% capacity, on-screen indicator	
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	
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)/2 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) 	
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)	
Safety	Camera: • IEC/EN 60950-1, IEC/EN 62368-1 Power supply: • IEC/EN 62368-1 • CSA/UL/KC/SAA/PSE 60950-1	
Physical data		
Weight (including battery)	1.4 kg (3.1 lb)	
Size (L × W × H)	 Lens vertical: 140 × 201.3 × 84.1 mm (5.5 × 7.9 × 3.3 in) Lens horisontal: 140 × 201.3 × 167.3 mm (5.5 × 7.9 × 6.6 in) 	
Battery weight	195 g (6.89 oz)	
Battery size (L \times W \times H)	$59 \times 66 \times 94$ mm (2.3 × 2.6 × 3.7 in)	
Tripod mounting	UNC 1/4"-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 USB Type-C to HDMI and PD adapter USB Type-C to USB Type-C cable (USB 2.0 standard) Accessory box II: Lens cap strap Lens cleaning cloth Neck strap Battery (2 ea) Battery (2 ea) Battery charger Hard transport case Infrared camera with lens Lens cap, front and rear (only for extra lenses) License card: FLIR Thermal Studio Pro (3 month subscription) + FLIR Route Creator Plugin for Thermal Studio Pro (3 month subscription) 	
Packaging, weight	5.9 kg (13.0 lb)	
Packaging, size	$500 \times 190 \times 370$ mm (19.7 \times 7.5 \times 14.6 in)	
EAN-13	7332558026311	
UPC-12	845188022167	
Country of origin	Sweden	

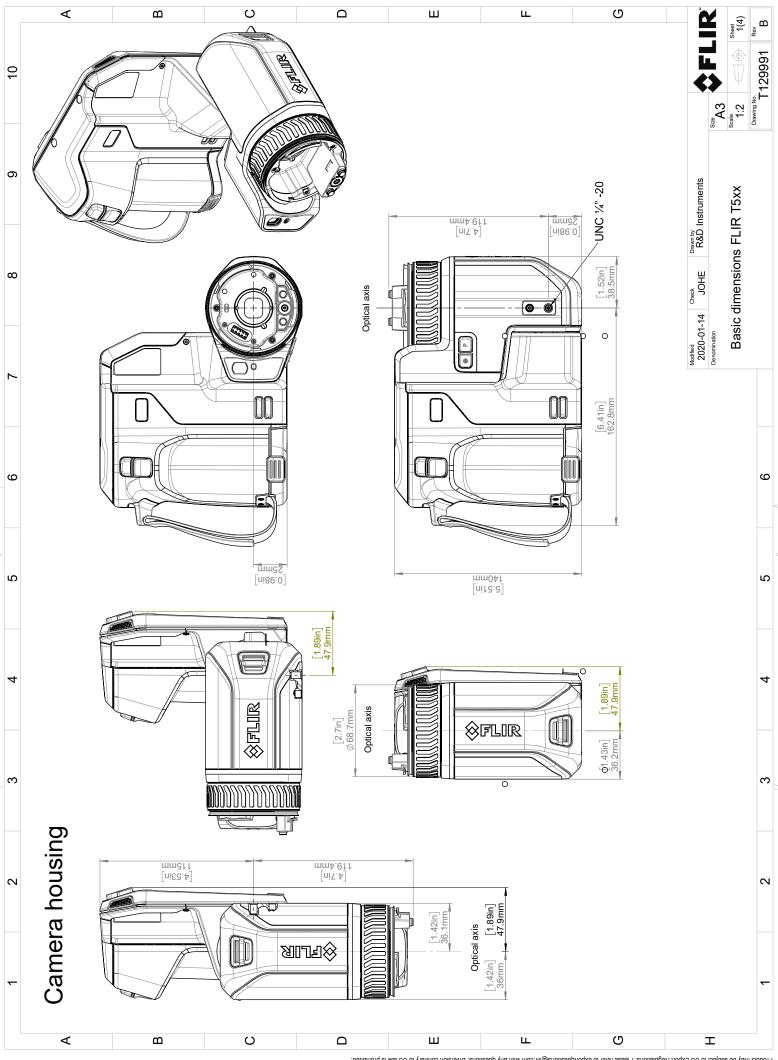
Supplies and accessories:

- T300238; Macro lens 2.0x with case
- T300095; IR lens, f=70 mm (6°) with case
- T131171ACC; Remote operation button
- T199300ACC; Battery
- T199347ACC; Hard transport case for FLIR T8xx, T5xx, and GF7x series
- T199601; Hand strap and neck strap
- T199610; Battery charger
- T300030; Option, No radio
- T911997; Tripod
- T911998; HDMI 2-port video splitter
- T300369; Mounting kit (FLIR T5xx, T8xx, Exx)
- T850105; FLIR Inspection Route Camera Option
- T850111; Option, Dual streaming
- + T199609; Option, Macro mode 50/71/101 μm for 24°
- T130337ACC; Calibration target
- T911630ACC; Power supply for camera, 15 W/3 A
- T911631ACC; USB 2.0 A to USB Type-C cable, 0.9 m
- T911633ACC; Power supply for battery charger
- 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
- T911846ACC; USB 2.0 A to USB Type-C with Power supply
- 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

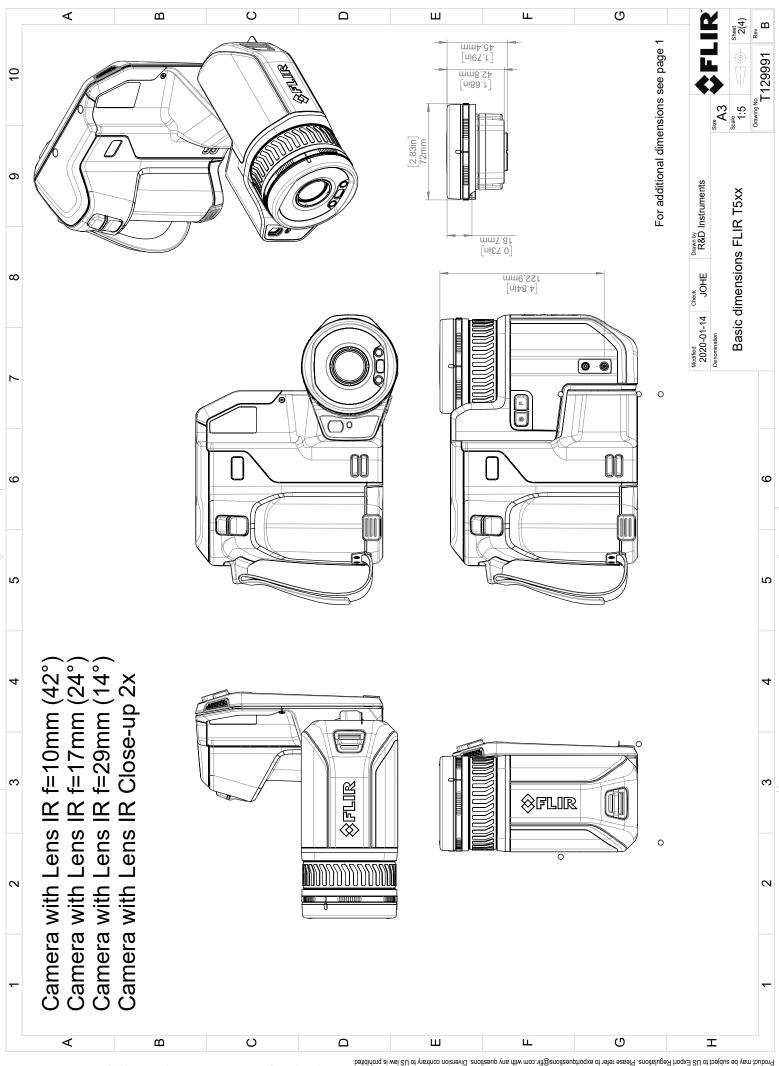


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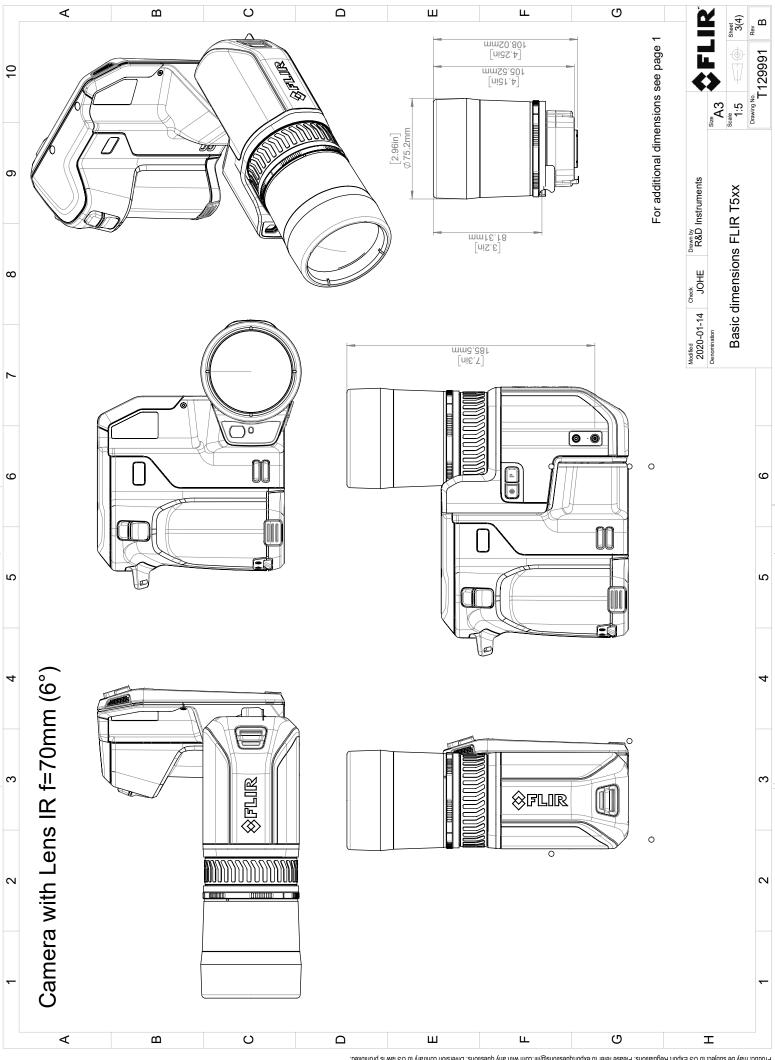
- T198495; Pouch
- T197771ACC; Bluetooth Headset
- T300244; FLIR Route Creator Plugin for FLIR Thermal Studio Pro, 1 Year Subscription
- T300342; FLIR Screen-EST, Perpetual license
- T300243; FLIR Thermal Studio Pro, 1 Year Subscription
- T300083; FLIR Thermal Studio Pro, Perpetual license
- T300341; FLIR Thermal Studio Standard, 1 Year Subscription
- T300258; FLIR Thermal Studio Standard, Perpetual license
- T198583; FLIR Tools+ (download card incl. license key)
- 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)
- 4232557; FLIR Research Studio, Professional Edition USB dongle only
- 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)
- 24971-010; FLIR Research Studio, Standard Edition USB dongle only
- 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
- INST-EW-0155; Extended Warranty 1 Year for A3xxf, T540, T600/bx, T610, T840, T860
- INST-EWGM-0165; Premium Service Package for T540, T600/bx, T610, T840, T860
- INST-GM-0150; General Maintenance Package for T540, T6xx, T840, T860



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Täby, Sweden July 07, 2021

AQ320246

CE Declaration of Conformity – EU Declaration of Conformity

Product:

Name and address of the manufacturer:	FLIR Systems AB
	PO Box 7376
	SE-187 15 Täby, Sweden

This declaration of conformity is issued under the sole responsibility of the manufacturer.

The object of the declaration: FLIR T5XX-, T8XX- and GF7X-series (Product Model Name FLIR-T8210). The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Directives

Directive Directive	2012/19/EU 2011/65/EU	Waste electrical and electric equipment RoHS and 2015/830/EU (Phtalates)	
Directive	2014/53/EU	Radio Equipment	Directive (RED)
Standards			
Emission:	EN 61000-6-3/A1:2011		EMC – Generic standards
Immunity:	EN 61000-6-2:2005		Electromagnetic Compability Generic
	EN 301489-1:2016 v2.1.0		ERM – EMC for radio equipment
	EN 301489-17:2012 v2.2.1	1	ERM – EMC Wideband data
EMC Radio	ETSI EN 301 489-17 v3.2.0)	EMC for radio, broadband data
			transmission
RoHS:	EN 50581:2012		Technical documentation
Radio:	ETSI EN 300 328 v2.2.2		Harmonized EN covering essential
			requirements of the R&TTE Directive
	ETSI EN 301 893 v.2.1.1		5GHz WLAN
Safety:	IEC 62368-1:2014 Ed 2 and	-	Audio/video, information and
	62368-1:2014/AC:2015/A	11:2017	communication technology equipment,
			Part 1: Safety

FLIR Systems AB Quality Assurance

Solon de

Lea Dabiri Quality Manager

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