

P/N: 78517-1101

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Website

http://www.flir.com

Customer support

http://support.flir.com

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Imaging and optical data		
Infrared resolution	320 × 240 pixels	
UltraMax (super-resolution)	Yes	
NETD	 <30 mK, 42° @ +30°C (+86°F) <50 mK, 14° @ +30°C (+86°F) 	
Field of view	 42° × 32° 14° × 10° 	
Minimum focus distance	 0.15 m (0.49 ft.), 42° 1.0 m (3.28 ft.), 14° 	
Minimum focus distance with MSX	 0.65 m (2.13 ft.), 42° 1.0 m (3.28 ft.), 14° 	
Focal length	 10 mm (0.39 in.), 42° 29 mm (1.41 in.), 14° 	
Spatial resolution (IFOV)	 2.41 mrad/pixel, 42° 0.75 mrad/pixel, 14° 	
Available extra lenses	• 24° (AutoCal)	
Lens identification	Automatic	
f number	 1.1, 42° 1.5, 14° 	
Image frequency	30 Hz	



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Imaging and optical data			
Focus			
	Continuous LDM One-shot LDM		
	One-shot contrastManual		
Field of view match	Yes		
Digital zoom	1–4× continuous		
Detector data			
Focal plane array/spectral range	Uncooled microbolometer/7.5–14 µm		
Detector pitch	17 µm		
Image presentation			
Resolution	640 × 480 pixels (VGA)		
Surface brightness (cd/m ²)	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 maximumAutomatic minimum		
Image presentation modes	Automatic maximumAutomatic minimum		
Image presentation modes Infrared image	Automatic maximum Automatic minimum Manual Yes		
Image presentation modes Infrared image Visual image	Automatic maximum Automatic minimum Manual Yes Yes		
Image presentation modes Infrared image Visual image Thermal fusion	Automatic maximum Automatic minimum Manual Yes Yes No		
Image presentation modes Infrared image Visual image	Automatic maximum Automatic minimum Manual Yes Yes		
Image presentation modes Infrared image Visual image Thermal fusion MSX	Automatic maximum Automatic minimum Manual Yes Yes No Yes		
Image presentation modes Infrared image Visual image Thermal fusion MSX Picture in Picture Gallery	Automatic maximum Automatic minimum Manual Yes Yes No Yes Resizable and movable		
Image presentation modes Infrared image Visual image Thermal fusion MSX Picture in Picture Gallery Measurement	Automatic maximum Automatic minimum Manual Yes Yes No Yes Resizable and movable Yes		
Image presentation modes Infrared image Visual image Thermal fusion MSX Picture in Picture Gallery	Automatic maximum Automatic minimum Manual Yes Yes No Yes Resizable and movable		
Image presentation modes Infrared image Visual image Thermal fusion MSX Picture in Picture Gallery Measurement	Automatic maximum Automatic minimum Manual Yes Yes No Yes Resizable and movable Yes -20 to 120°C (-4 to 248°F)		
Image presentation modes Infrared image Visual image Thermal fusion MSX Picture in Picture Gallery Measurement Camera temperature range Object temperature range and accuracy (for	Automatic maximum Automatic minimum Manual Yes Yes No Yes Resizable and movable Yes -20 to 120°C (-4 to 248°F) 0 to 650°C (32 to 1202°F)		
Image presentation modes Infrared image Visual image Thermal fusion MSX Picture in Picture Gallery Measurement Camera temperature range	 Automatic maximum Automatic minimum Manual Yes Yes Yes Resizable and movable Yes -20 to 120°C (-4 to 248°F) 0 to 650°C (32 to 1202°F) Optional 300 to 1000°C (572 to 1832°F) Range -20 to 120°C (-4 to 248°F): -20 to 120°C (-4 to 248°F) Optional 300 to 1000°C (572 to 1832°F) 		
Image presentation modes Infrared image Visual image Thermal fusion MSX Picture in Picture Gallery Measurement Camera temperature range Object temperature range and accuracy (for	 Automatic maximum Automatic minimum Manual Yes Yes Yes Resizable and movable Yes -20 to 120°C (-4 to 248°F) 0 to 650°C (32 to 1202°F) Optional 300 to 1000°C (572 to 1832°F) Range -20 to 120°C (-4 to 248°F): -20 to 100°C (-4 to 248°F) 0 to 650°C (32 to 1202°F) Optional 300 to 1000°C (572 to 1832°F) 		
Image presentation modes Infrared image Visual image Thermal fusion MSX Picture in Picture Gallery Measurement Camera temperature range Object temperature range and accuracy (for	 Automatic maximum Automatic minimum Manual Yes Yes Yes Resizable and movable Yes Resizable and movable Yes -20 to 120°C (-4 to 248°F) 0 to 650°C (32 to 1202°F) Optional 300 to 1000°C (572 to 1832°F) Range -20 to 120°C (-4 to 248°F): -20 to 120°C (-4 to 248°F) 0 to 650°C (32 to 1202°F) Range -20 to 120°C (-4 to 248°F):		
Image presentation modes Infrared image Visual image Thermal fusion MSX Picture in Picture Gallery Measurement Camera temperature range Object temperature range and accuracy (for	 Automatic maximum Automatic minimum Manual Yes Yes Yes Resizable and movable Yes -20 to 120°C (-4 to 248°F) 0 to 650°C (32 to 1202°F) Optional 300 to 1000°C (572 to 1832°F) Range -20 to 120°C (-4 to 248°F): -20 to 120°C (-4 to 248°F) 0 to 650°C (32 to 1202°F) Range -20 to 120°C (-4 to 248°F):		
Image presentation modes Infrared image Visual image Thermal fusion MSX Picture in Picture Gallery Measurement Camera temperature range Object temperature range and accuracy (for	 Automatic maximum Automatic minimum Manual Yes Yes Yes Resizable and movable Yes -20 to 120°C (-4 to 248°F) 0 to 650°C (32 to 1202°F) Optional 300 to 1000°C (572 to 1832°F) Range -20 to 120°C (-4 to 248°F): -20 to 100°C (-4 to 212°F) Optional 300 to 1000°C (572 to 1832°F) Range -20 to 120°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) 		



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Screening mode			
Sampling average mode	Recommended temperature range: 30 to 45°C (86 to 113°F) in stable room temperature		
	Accuracy (drift): ±0.3°C (±0.5°F)1		
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	 Black hot Iron Lava Rainbow 		
Setup commands Languages	 Black hot Iron Lava Rainbow Rainbow HC Local adaptation of units, language, date and time 		
	 Black hot Iron Lava Rainbow Rainbow HC Local adaptation of units, language, date and time formats 		
Languages	 Black hot Iron Lava Rainbow Rainbow HC Local adaptation of units, language, date and time formats 		
Languages Service functions	 Black hot Iron Lava Rainbow Rainbow HC Local adaptation of units, language, date and time formats 21 		
Languages Service functions Camera software update	 Black hot Iron Lava Rainbow Rainbow HC Local adaptation of units, language, date and time formats 21 		
Languages Service functions Camera software update Storage of images	Black hot Iron Lava Rainbow Rainbow HC Local adaptation of units, language, date and time formats 21 Using USB cable or SD card		

1. No external blackbody needed.



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Remote control operation Using USB cable or Wi-Fi Image file format Standard JPEG, measurement data included. Infrared-only mode Image annotations 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: FulR meters with METERLINK Compass Yes Laser distance meter information Yes GPS Yes inclusion data automatically added to every still image and the first frame in video from built-in GPS Video recording In camera FIRR (.csq) Radiometric infrared-video recording H1264 to memory card Video streaming (compressed) Over UVC Non-radiometric infrared-video streaming (compressed) Over UVC Non-radiometric infrared-video streaming (compressed) Yes Digital camera Fixed Resolution 5 MP with LED light Focus Fixed Field of view S3* X 41*	Storage of images			
Infrared-only mode Image annotations Image annotation 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 No GPS Yes: location data automatically added to every still image and the first frame in video from built-in GPS Video recording in camera Metage and the first frame in video from built-in GPS Video recording in camera Metage and the first frame in video from built-in GPS Video recording in camera Metage and the first frame in video from built-in GPS Video recording in camera H.264 to memory card Non-radiometric infrared-video recording H.264 to memory card Visual video recording Ves Didital camera S Non-radiometric infrared-video recording H.264 (AVC) over RTSP (Wi-Fi) Visual video streaming		Using USB cable or Wi-Fi		
Voice60 seconds built-in microphone and speaker (and via Bluetooth) on still images and videoTextText from predefined list or soft keyboard on touchscreenVisual image annotationYesImage sketchYes: on infrared images onlySketchFrom touchscreenMETERLINKWireless connection (Bluetooth) to: FLIR meters with METERLINKCompassYesLaser distance meter informationYesArea measurement informationNoGPSYes: location data automatically added to every still image and the first frame in video from built-in GPSVideo recording in cameraRTRR (.csq)Radiometric infrared-video recordingH.264 to memory cardVisual video recordingH.264 to memory cardVideo streaming (compressed)Over UVCNon-radiometric infrared-video streaming (compressed)Over UVCNon-radiometric infrared-video streaming (compressed)MUPEG over RTSP (Wi-Fi) • M2PEG over RTSP (Wi-Fi)Visual video streaming (compressed)YesDigital cameraImage additionResolution5 MP with LED lightFocusFixedField of view53° × 41°Video lampBuilt-in LED lightLaser alignmentPosition is automatically displayed on the infrared imageLaser distance meterActivated by a dedicated buttonLaserUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMetterRLINK/BluetoothCommunication with headset and external		Standard JPEG, measurement data included.		
via Bluetooth) on still images and videoTextText from predefined list or soft keyboard on touchscreenVisual image annotationYesImage sketchFrom touchscreenMETERLINKWireless connection (Bluetooth) to: FLIR meters with METERLINKCompassYesLaser distance meter informationYesArea measurement informationNoGPSYes: location data automatically added to every still image and the first frame in video from built-in GPSVideo recording in cameraMETERLINKRadiometric infrared-video recordingH.264 to memory cardVisual video recordingH.264 to memory cardVideo streaming (compressed)Over UVCNon-radiometric infrared-video streaming (compressed)Over UVCNon-radiometric video streaming (compressed)Over UVCNon-radiometric video streaming (compressed)·Non-radiometric video streaming (compressed)·Visual video streaming (compressed)·Visual video streaming (compressed)·Nouted oper RTSP (Wi-Fi) ··Visual video streaming (compressed)·Visual video streaming (compressed)·Video lampBuilt-in LED lightFacerImage and video vient video streamingVideo lampBuilt-in LED lightLaser alignmentPosition is automatically displayed on the infrared mageLaser alignmentCompaseLaser alignmentClass 2, 0.05-40 m (1.6-131 ft.) ±1% of measured distanceLase	Image annotations			
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Image sketchYes: on infrared images onlySketchFrom touchscreenMETERLINKWireless connection (Bluetooth) to: FLIR meters with METERLINKCompassYesLaser distance meter informationYesArea measurement informationNoGPSYes: location data automatically added to every still image and the first frame in video from built-in GPSVideo recording in cameraRTRR (.csq)Radiometric infrared-video recordingH.264 to memory cardVisual video recordingH.264 to memory cardVisual video recordingOver UVCCompressed)Over UVCNon-radiometric infrared-video streaming (compressed)• H.264 (AVC) over RTSP (Wi-Fi) • MPEG4 over RTSP (Wi-Fi) • MEGA over RTSP (Wi-Fi)Visual video streaming5 MP with LED lightFocusFixedField of view53* × 41°Video importS1* × 41°Video importPosition is automatically displayed on the infrared imageLaser alignmentPosition is automatically displayed on the infrared imageLaser alignmentClase 2, 0.05–40 m (1.6–131 ft.) ±1% of measured distanceLaserUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLINK/BluetoothCommunication with headset and external sensors	Text	Text from predefined list or soft keyboard on		
Sketch From touchscreen METERLINK Wireless connection (Bluetooth) to: FLIR meters with METERLINK Compass Yes Laser distance meter information Yes Area measurement information No GPS Yes: location data automatically added to every still image and the first frame in video from built-in GPS Video recording in camera RTRR (.csq) Radiometric infrared-video recording H.264 to memory card Visual video recording H.264 to memory card Visual video recording H.264 to memory card Visual video recording Over UVC Non-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) • MPEGA over RTSP (Wi-Fi) • MPEGA over RTSP (Wi-Fi) • Visual video streaming SiMP with LED light Focus Fixed Field of view 53* × 41° Video lamp Built-in LED light Laser alignment Position is automatically displayed on the infrared image Laser alignment Class 2, 0.05–40 m (1.6–131 ft.) ±1% of measured distance	Visual image annotation	Yes		
METERLINK Wireless connection (Bluetooth) to: FLIR meters with METERLINK Compass Yes Laser distance meter information No 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 Video streaming Radiometric infrared-video streaming (compressed) Over UVC Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) • Visual video streaming Yes Digital camera Resolution 5 MP with LED light Focus Fixed Field of view 53" x 41" Video lamp Built-in LED light Laser alignment Position is automatically displayed on the infrared image Laser distance meter Activated by a dedicated button Laser distance meter Video lase 2.0, Bluetooth, Wi-Fi, DisplayPort Meter pointer Uses 2.0, Bluetooth, Wi-Fi, DisplayPort	Image sketch	Yes: on infrared images only		
FLIR meters with METERLINKCompassYesLaser distance meter informationNoGPSYes: location data automatically added to every still image and the first frame in video from built-in GPSVideo recording in cameraRadiometric infrared-video recordingRTRR (.csq)Non-radiometric infrared-video recordingH.264 to memory cardVisual video recordingH.264 to memory cardVisual video recordingOver UVCRadiometric infrared-video streaming (compressed)Over UVCNon-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture)• H.264 (AVC) over RTSP (Wi-Fi) • MJPEG over UVC and RTSP (Wi-Fi) • MJPEG over UVC and RTSP (Wi-Fi) 	Sketch	From touchscreen		
CompassYesLaser distance meter informationYesArea measurement informationNoGPSYes: location data automatically added to every still image and the first frame in video from built-in GPSVideo recording in cameraRadiometric infrared-video recordingRTRR (.csq)Non-radiometric infrared-video recordingH.264 to memory cardVisual video recordingH.264 to memory cardVisual video recordingOver UVCCompressed)Over UVCNon-radiometric infrared-video streaming (compressed)Non-radiometric video streaming (compressed)• H.264 (AVC) over RTSP (Wi-Fi) • MJPEG over UVC and RTSP (Wi-Fi) • MJPEG over UVC and RTSP (Wi-Fi) • MJPEG over UVC and RTSP (Wi-Fi)Visual video streamingYesDigital cameraResolution5 MP with LED lightFocusFixedField of view53° × 41°Video lampBuilt-in LED lightLaser pointerLaser distance meterActivated by a dedicated buttonLaserIclaser Q.0.05-40 m (1.6-131 ft.) ±1% of measured distanceInterfacesUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLINK/BluetoothCommunication with headset and external sensors	METERLINK	Wireless connection (Bluetooth) to:		
Laser distance meter informationYesArea measurement informationNoGPSYes: location data automatically added to every still image and the first frame in video from built-in GPSVideo recording in cameraRadiometric infrared-video recordingRTRR (.csq)Non-radiometric infrared-video recordingH.264 to memory cardVisual video recordingH.264 to memory cardVideo streamingOver UVCRadiometric infrared-video streaming (compressed)• H.264 (AVC) over RTSP (Wi-Fi) • MPEG4 over RTSP (Wi-Fi)Non-radiometric video streaming (compressed)• H.264 (AVC) over RTSP (Wi-Fi) • MPEG4 over RTSP (Wi-Fi)Visual video streamingYesDigital cameraResolution5 MP with LED lightFocusFixedField of view53° × 41°Video lampBuilt-in LED lightLaser alignmentPosition is automatically displayed on the infrared imageLaser distance meterActivated by a dedicated buttonLaserLaser distanceData communication interfacesUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLINK/BluetoothCommunication with headset and external sensors		FLIR meters with METERLiNK		
Area measurement informationNoGPSYes: location data automatically added to every still image and the first frame in video from built-in GPSVideo recording in cameraRadiometric infrared-video recordingRTRR (.csq)Non-radiometric infrared-video recordingH.264 to memory cardVideo streamingH.264 to memory cardVideo streamingOver UVCRadiometric video streaming (compressed: IR, MSX, visual, Picture in Picture)• H.264 (AVC) over RTSP (Wi-Fi) • MJPEG aver RTSP (Wi-Fi)Visual video streamingVersDigital cameraResolution5 MP with LED lightFocusFixedField of view53° x 41°Video lampBuilt-in LED lightLaser alignmentPosition is automatically displayed on the infrared imageLaser distance meterActivated by a dedicated buttonLaserClass 2, 0.05-40 m (1.6-131 ft.) ±1% of measured distanceData communication interfacesUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLINK/BluetoothCommunication with headset and external sensors	Compass	Yes		
GPSYes: location data automatically added to every still image and the first frame in video from built-in GPSVideo recording in cameraRRadiometric infrared-video recordingRTRR (.csq)Non-radiometric infrared-video recordingH.264 to memory cardVisual video recordingH.264 to memory cardVideo streamingOver UVC(compressed)Over UVCNon-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture)• H.264 (AVC) over RTSP (Wi-Fi) • MPEG4 over RTSP (Wi-Fi)Visual video streamingYesDigital cameraRResolution5 MP with LED lightFocusFixedField of view53° x 41°Video lampBuilt-in LED lightLaser pointerActivated by a dedicated buttonLaser distance meterActivated by a dedicated buttonLaserClass 2, 0.05–40 m (1.6–131 ft.) ±1% of measured distanceData communication interfacesUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLINK/BluetoothCommunication with headset and external sensors	Laser distance meter information	Yes		
still image and the first frame in video from built-in GPSVideo recording in cameraRTRR (.csq)Radiometric infrared-video recordingH.264 to memory cardVisual video recordingH.264 to memory cardVisual video recordingH.264 to memory cardVideo streaming (compressed)Over UVCNon-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture)• H.264 (AVC) over RTSP (Wi-Fi) • MJPEG over UVC and RTSP (Wi-Fi)Visual video streaming (compressed)• H.264 (AVC) over RTSP (Wi-Fi) • MJPEG over UVC and RTSP (Wi-Fi)Visual video streamingYesDigital cameraFixedResolution5 MP with LED lightFocusFixedField of view53° × 41°Video lampBuilt-in LED lightLaser pointerLaser alignmentLaser distance meterActivated by a dedicated buttonLaserClass 2, 0.05–40 m (1.6–131 ft.) ±1% of measured distanceData communication interfacesUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLINK/BluetoothCommunication with headset and external sensors	Area measurement information	No		
Radiometric infrared-video recordingRTRR (.csq)Non-radiometric infrared-video recordingH.264 to memory cardVisual video recordingH.264 to memory cardVideo streamingOver UVCRadiometric infrared-video streaming (compressed)• H.264 (AVC) over RTSP (Wi-Fi)Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture)• H.264 (AVC) over RTSP (Wi-Fi)Visual video streaming• H.264 (AVC) over RTSP (Wi-Fi)Visual video streaming• MPEG4 over RTSP (Wi-Fi)Visual video streamingYesDigital camera• MIPEG4 over UVC and RTSP (Wi-Fi)Field of view53° x 41°Video lampBuilt-in LED lightLaser pointer• Activated by a dedicated buttonLaser alignmentPosition is automatically displayed on the infrared imageLaser distance meterActivated by a dedicated buttonLaserUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLINK/BluetoothCommunication with headset and external sensors	GPS	still image and the first frame in video from built-in		
Non-radiometric infrared-video recordingH.264 to memory cardVisual video recordingH.264 to memory cardVideo streamingItel to memory cardRadiometric infrared-video streaming (compressed)Over UVCNon-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture)• H.264 (AVC) over RTSP (Wi-Fi) • MPEG4 over RTSP (Wi-Fi)Visual video streaming• H.264 (AVC) over RTSP (Wi-Fi)Visual video streamingYesDigital cameraItel to the total stream of total stream of the total stream of total stream of total stream of the total stream of total str	Video recording in camera			
Visual video recordingH.264 to memory cardVideo streamingOver UVCRadiometric infrared-video streaming (compressed)Over UVCNon-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture)+ H.264 (AVC) over RTSP (Wi-Fi) • MPEG4 over RTSP (Wi-Fi)Visual video streamingYesDigital cameraFixedResolution5 MP with LED lightFocusFixedField of view53° × 41°Video lampBuilt-in LED lightLaser pointerPosition is automatically displayed on the infrared imageLaser distance meterActivated by a dedicated buttonLaserClass 2, 0.05-40 m (1.6-131 ft.) ±1% of measured distanceData communication interfacesUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLiNK/BluetoothCommunication with headset and external sensors	Radiometric infrared-video recording	RTRR (.csq)		
Video streamingRadiometric infrared-video streaming (compressed)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 streamingYesDigital cameraResolution5 MP with LED lightFocusFixedField of view53° × 41°Video lampBuilt-in LED lightLaser pointerLaser distance meterActivated by a dedicated buttonLaserClass 2, 0.05-40 m (1.6-131 ft.) ±1% of measured distanceData communication interfacesInterfacesUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLiNK/BluetoothCommunication with headset and external sensors	Non-radiometric infrared-video recording			
Radiometric infrared-video streaming (compressed)Over UVCNon-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 streamingYesDigital cameraResolution5 MP with LED lightFocusFixedField of view53° × 41°Video lampBuilt-in LED lightLaser pointerLaser distance meterActivated by a dedicated buttonLaserClass 2, 0.05-40 m (1.6-131 ft.) ±1% of measured distanceData communication interfacesUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLINK/BluetoothCommunication with headset and external sensors	Visual video recording	,		
Radiometric infrared-video streaming (compressed)Over UVCNon-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 streamingYesDigital cameraResolution5 MP with LED lightFocusFixedField of view53° × 41°Video lampBuilt-in LED lightLaser pointerLaser distance meterActivated by a dedicated buttonLaserClass 2, 0.05-40 m (1.6-131 ft.) ±1% of measured distanceData communication interfacesUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLINK/BluetoothCommunication with headset and external sensors				
IR, MSX, visual, Picture in Picture) M.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 S 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 Data communication interfaces	Video streaming			
Digital cameraResolution5 MP with LED lightFocusFixedField of view53° × 41°Video lampBuilt-in LED lightLaser pointerImageLaser alignmentPosition is automatically displayed on the infrared imageLaser distance meterActivated by a dedicated buttonLaserClass 2, 0.05–40 m (1.6–131 ft.) ±1% of measured distanceData communication interfacesUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLINK/BluetoothCommunication with headset and external sensors	Radiometric infrared-video streaming	Over UVC		
Resolution5 MP with LED lightFocusFixedField of view53° × 41°Video lampBuilt-in LED lightLaser pointerPosition is automatically displayed on the infrared imageLaser distance meterActivated by a dedicated buttonLaserClass 2, 0.05–40 m (1.6–131 ft.) ±1% of measured distanceData communication interfacesUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLINK/BluetoothCommunication with headset and external sensors	Radiometric infrared-video streaming (compressed) Non-radiometric video streaming (compressed:	 H.264 (AVC) over RTSP (Wi-Fi) MPEG4 over RTSP (Wi-Fi) 		
FocusFixedField of view53° × 41°Video lampBuilt-in LED lightLaser pointerPosition is automatically displayed on the infrared imageLaser distance meterActivated by a dedicated buttonLaserClass 2, 0.05–40 m (1.6–131 ft.) ±1% of measured distanceData communication interfacesUSB 2.0, Bluetooth, Wi-Fi, DisplayPortMETERLINK/BluetoothCommunication with headset and external sensors	Radiometric infrared-video streaming (compressed) 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) 		
Field of view 53° × 41° Video lamp Built-in LED light Laser pointer 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 Data communication interfaces USB 2.0, Bluetooth, Wi-Fi, DisplayPort METERLiNK/Bluetooth Communication with headset and external sensors	Radiometric infrared-video streaming (compressed) Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) Visual video streaming	 H.264 (AVC) over RTSP (Wi-Fi) MPEG4 over RTSP (Wi-Fi) MJPEG over UVC and RTSP (Wi-Fi) 		
Field of view 53° × 41° Video lamp Built-in LED light Laser pointer 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 Data communication interfaces USB 2.0, Bluetooth, Wi-Fi, DisplayPort METERLiNK/Bluetooth Communication with headset and external sensors	Radiometric infrared-video streaming (compressed) Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) Visual video streaming Digital camera	 H.264 (AVC) over RTSP (Wi-Fi) MPEG4 over RTSP (Wi-Fi) MJPEG over UVC and RTSP (Wi-Fi) Yes 		
Laser pointer Position is automatically displayed on the infrared image 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 Data communication interfaces Interfaces Interfaces USB 2.0, Bluetooth, Wi-Fi, DisplayPort METERLINK/Bluetooth Communication with headset and external sensors	Radiometric infrared-video streaming (compressed) Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) Visual video streaming Digital camera Resolution	H.264 (AVC) over RTSP (Wi-Fi) MPEG4 over RTSP (Wi-Fi) MJPEG over UVC and RTSP (Wi-Fi) Yes 5 MP with LED light		
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 Data communication interfaces Interfaces Interfaces USB 2.0, Bluetooth, Wi-Fi, DisplayPort METERLINK/Bluetooth Communication with headset and external sensors	Radiometric infrared-video streaming (compressed) Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) Visual video streaming Digital camera Resolution Focus	H.264 (AVC) over RTSP (Wi-Fi) MPEG4 over RTSP (Wi-Fi) MJPEG over UVC and RTSP (Wi-Fi) Yes 5 MP with LED light Fixed		
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 Data communication interfaces Interfaces Interfaces USB 2.0, Bluetooth, Wi-Fi, DisplayPort METERLINK/Bluetooth Communication with headset and external sensors	Radiometric infrared-video streaming (compressed) Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) Visual video streaming Digital camera Resolution Focus Field of view	 H.264 (AVC) over RTSP (Wi-Fi) MPEG4 over RTSP (Wi-Fi) MJPEG over UVC and RTSP (Wi-Fi) Yes 5 MP with LED light Fixed 53° × 41° 		
Laser distance meter Activated by a dedicated button Laser Class 2, 0.05–40 m (1.6–131 ft.) ±1% of measured distance Data communication interfaces Interfaces Interfaces USB 2.0, Bluetooth, Wi-Fi, DisplayPort METERLiNK/Bluetooth Communication with headset and external sensors	Radiometric infrared-video streaming (compressed) Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) Visual video streaming Digital camera Resolution Focus Field of view Video lamp	 H.264 (AVC) over RTSP (Wi-Fi) MPEG4 over RTSP (Wi-Fi) MJPEG over UVC and RTSP (Wi-Fi) Yes 5 MP with LED light Fixed 53° × 41° 		
Laser Class 2, 0.05–40 m (1.6–131 ft.) ±1% of measured distance Data communication interfaces USB 2.0, Bluetooth, Wi-Fi, DisplayPort Interfaces USB 2.0, Bluetooth, Wi-Fi, DisplayPort METERLiNK/Bluetooth Communication with headset and external sensors	Radiometric infrared-video streaming (compressed) Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) Visual video streaming Digital camera Resolution Focus Field of view Video lamp	H.264 (AVC) over RTSP (Wi-Fi) MPEG4 over RTSP (Wi-Fi) MJPEG over UVC and RTSP (Wi-Fi) Yes 5 MP with LED light Fixed 53° × 41° Built-in LED light Position is automatically displayed on the infrared		
Interfaces USB 2.0, Bluetooth, Wi-Fi, DisplayPort METERLiNK/Bluetooth Communication with headset and external sensors	Radiometric infrared-video streaming (compressed) Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) Visual video streaming Digital camera Resolution Focus Field of view Video lamp Laser pointer Laser alignment	H.264 (AVC) over RTSP (Wi-Fi) MPEG4 over RTSP (Wi-Fi) MJPEG over UVC and RTSP (Wi-Fi) Yes 5 MP with LED light Fixed 53° × 41° Built-in LED light Position is automatically displayed on the infrared image		
Interfaces USB 2.0, Bluetooth, Wi-Fi, DisplayPort METERLiNK/Bluetooth Communication with headset and external sensors	Radiometric infrared-video streaming (compressed) Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) Visual video streaming Digital camera Resolution Focus Field of view Video lamp Laser pointer Laser distance meter	 H.264 (AVC) over RTSP (Wi-Fi) MPEG4 over RTSP (Wi-Fi) MJPEG over UVC and RTSP (Wi-Fi) Yes 5 MP with LED light Fixed 53° × 41° Built-in LED light Position is automatically displayed on the infrared image Activated by a dedicated button Class 2, 0.05–40 m (1.6–131 ft.) ±1% of 		
METERLiNK/Bluetooth Communication with headset and external sensors	Radiometric infrared-video streaming (compressed) Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) Visual video streaming Digital camera Resolution Focus Field of view Video lamp Laser alignment Laser distance meter Laser	 H.264 (AVC) over RTSP (Wi-Fi) MPEG4 over RTSP (Wi-Fi) MJPEG over UVC and RTSP (Wi-Fi) Yes 5 MP with LED light Fixed 53° × 41° Built-in LED light Position is automatically displayed on the infrared image Activated by a dedicated button Class 2, 0.05–40 m (1.6–131 ft.) ±1% of 		
Wi-Fi Peer to peer (<i>ad hoc</i>) or infrastructure (network)	Radiometric infrared-video streaming (compressed) Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) Visual video streaming Digital camera Resolution Focus Field of view Video lamp Laser pointer Laser distance meter Laser	 H.264 (AVC) over RTSP (Wi-Fi) MPEG4 over RTSP (Wi-Fi) MJPEG over UVC and RTSP (Wi-Fi) Yes 5 MP with LED light Fixed 53° × 41° Built-in LED light Position is automatically displayed on the infrared image Activated by a dedicated button Class 2, 0.05–40 m (1.6–131 ft.) ±1% of measured distance 		
	Radiometric infrared-video streaming (compressed) Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture) Visual video streaming Digital camera Resolution Focus Field of view Video lamp Laser alignment Laser distance meter Laser Interfaces	 H.264 (AVC) over RTSP (Wi-Fi) MPEG4 over RTSP (Wi-Fi) MJPEG over UVC and RTSP (Wi-Fi) Yes 5 MP with LED light Fixed 53° × 41° Built-in LED light Position is automatically displayed on the infrared image Activated by a dedicated button Class 2, 0.05–40 m (1.6–131 ft.) ±1% of measured distance USB 2.0, Bluetooth, Wi-Fi, DisplayPort Communication with headset and external 		





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Data communication interfaces			
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		
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		
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 Class B (emission) 		
Radio spectrum	 ETSI EN 300 328 FCC Part 15.249 RSS-247 Issue 2 		
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	EN/UL/CSA/PSE 60950-1		



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Physical data		
Weight (including battery)	1 kg (2.2 lb.)	
Size $(L \times W \times H)$	278.4 × 116.1 × 113.1 mm (11.0 × 4.6 × 4.4 in.)	
Battery weight	140 g (4.9 oz.)	
Battery size $(L \times W \times H)$	150 × 46 × 55 mm (5.9 × 1.8 × 2.2 in.)	
Tripod mounting	UNC 1/4"-20	
Housing material	PCABS with TPE, magnesium	
Color	Black	
Warranty and service		
Warranty	http://www.flir.com/warranty/	
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° FLIR Thermal Studio Starter Hard transport case Infrared camera with lens Lens cap, front	
Packaging, weight	6.2 kg (13.7 lb.)	
Packaging, size	500 × 190 × 370 mm (19.7 × 7.5 × 14.6 in.)	
EAN-13	4743254004658	
UPC-12	845188022655	
Country of origin	Estonia	

Supplies & accessories:

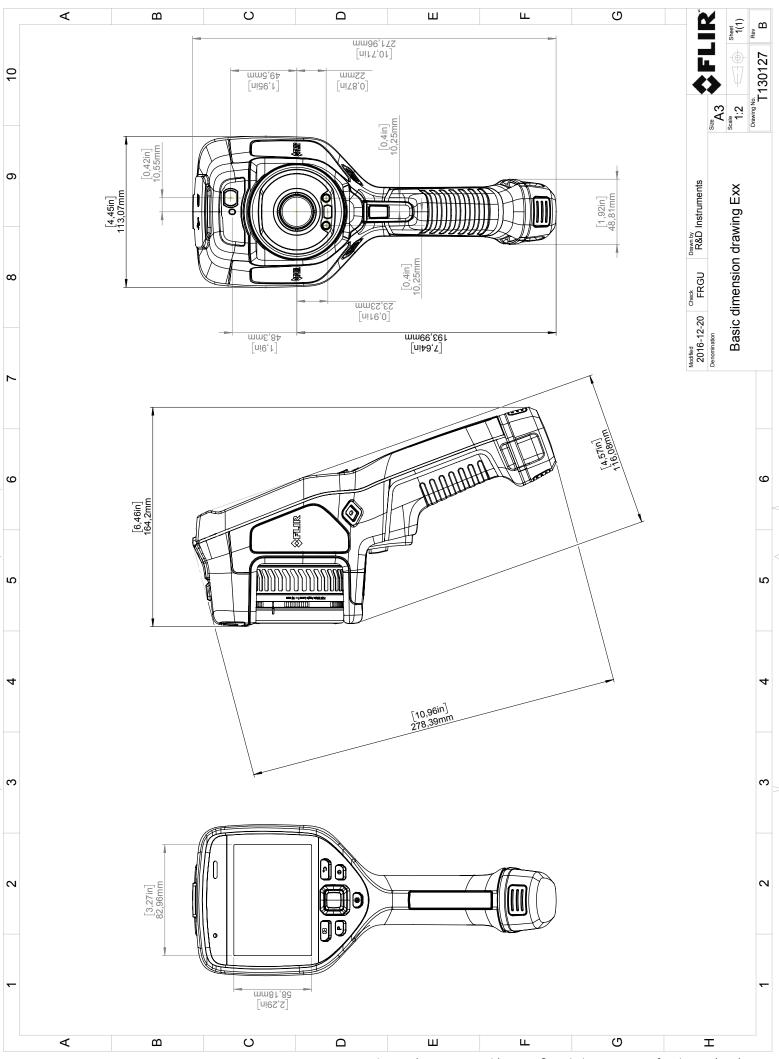
- T300238; Macro lens 2.0x with case
- T131171ACC; Remote operation button
- T300030; Option, No radio
- T911997; Tripod



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- T911998; HDMI 2-port video splitter
- T300369; Mounting kit (FLIR T5xx, T8xx, Exx)
- T300344; EST Camera kit (FLIR Exx/T5xx/T8xx)
- T850112; Option, Auto-screening
- T850111; Option, Dual streaming
- T130337ACC; Calibration target
- T199330ACC; Battery
- T199346ACC; Hard transport case for FLIR Exx series
- T199425ACC; Battery charger
- T199557ACC; Accessory Box II
- T199559; High temperature option, +300 to +1000°C
- T199588; IR lens, f=29 mm (14°) with case
- T199589; IR lens, f=17 mm (24°) with case
- T199590; IR lens, f=10 mm (42°) with case
- 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
- 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
- T911846ACC; USB 2.0 A to USB Type-C with Power supply
- T197771ACC; Bluetooth Headset
- T300342; FLIR Screen EST, Perpetual license
- 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)
- 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)
- 4220499; FLIR Research Studio 1 Year Subscription (online activation)
- 4220500; FLIR Research Studio Perpetual License (online activation)
- 4220646; FLIR Research Studio Perpetual License (USB dongle)
- INST-EW-0140; Extended Warranty 1 Year for E53, E75, E85, E95
- INST-EWGM-0135; Premium Service Package for A35, A65, E53, E75, E85, E95
- INST-GM-0125; General Maintenance Package for A35, A65, Exx, Kxx



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August 26, 2020 Täby, Sweden

AQ320222

CE Declaration of Conformity – EU Declaration of Conformity

Product: FLIR E53 /E54 /E75 /E76 /E85 /E86 /E95 /E96 -series 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 E53 /E54 /E75 /E76 /E85 /E86 / E95 /E96-series (Product Model Name FLIR-E7850).

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

Directives:

Directive Directive Directive Directive	2012/19/EU 2014/53/EU 1999/519/EC 2011/65/EU	Radio Equipme	II and electric equipment nt Directive (RED) oposure to electromagnetic fields (SAR) /830/EU
Standards:			
Emission:	EN 61000-6-3/	A1:2011	Electromagnetic Compability
			Generic standards – Emission
Immunity:	EN 61000-6-2:	2005	Electromagnetic Compability
	Draft EN 30148	89-1:2016 v2.1.0	Generic standards – Immunity
	EN 301489-17:	2012 v2.2.1	
Laser:	EN 60825-1		Safety of laser products
Radio:	ETSI EN 300 32	28 v1.9.1,v2.1.1	Harmonized EN covering essential requirements of the R&TTE Directive
	ETSI EN 301 89	3 v1.8.1	Harmonized EN covering essential reqs
SAR:	EN 62209-2		Human exposure Wireless
Safety (Battery charger	·):		Information technology equipment
	IEC 60950-1:20	IEC 60950-1:2005+A1 EN 60950-	
	1:2006+A11:20	11:2009+A1:2010+A2:2013+AC:2011+A12:2011	
RoHS:	EN 50581:2012	2	Technical documentation

FLIR Systems AB Quality Assurance

ter Jolon

Lea Dabiri Quality Manager

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