FLIR A50 Thermal Core 95°

P/N: 89895-0101

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Website

http://www.flir.com

Customer support

http://support.flir.com

General
When a camera is ordered the following must be selected, as a minimum: 1. one of the thermal cores: • FLIR A50 Thermal Core • FLIR A70 Thermal Core 2. one of the configurations: • Smart Sensor configuration (FLIR A50/A70) • Image Streaming configuration (FLIR A50/A70) The following options are available: • Antenna WLAN 2.4/5 GHz + Wi-Fi • Option, Visual camera including MSX • Advanced Smart Sensor configuration • Advanced Image Streaming configuration **Please note the following:** • The MSX functionality will not work on the 95° camera as the visual camera FOV is 67° diagonally. The separate visual camera feed will work, but no MSX or blending will be possible. If the *Option, Visual camera including MSX* is purchased along with a 95° camera, the camera will be delivered with this option but it will be limited to using either Visual or IR, or both, but not combining them to create an MSX blended video feed. • The *Advanced Smart Sensor configuration* and the *Advanced Image Streaming configuration* require the *Smart Sensor configuration (FLIR A50/A70)* and the *Image Streaming configuration (FLIR A50/A70)*, respectively.

Imaging and optical data	
Infrared resolution	464 × 348 pixels
Thermal sensitivity (NETD)	35 mK
Field of view (FOV)	95° × 74°
Minimum focus distance	0.1 m (0.33 ft)
Focal length	4.1 mm (0.16 in)
Spatial resolution (IFOV)	4.0 mrad/pixel
f-number	1.4
Image frequency	30 Hz
Focus	Fixed

Detector data	
Focal plane array/spectral range	Uncooled microbolometer/7.5–14 µm
Detector pitch	17 µm

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Measurement	
Camera temperature range	• –20 to 175°C (–4 to 347°F) • 175 to 1000°C (347 to 1832°F)
Object temperature range and accuracy (for ambient temperature 15–35°C (59–95°F))	• Range –20 to 175°C (–4 to 347°F): ◦ –20 to 100°C (–4 to 212°F), accuracy ±2°C (±3.6°F) ◦ 100 to 175°C (212 to 347°F), accuracy ±2% • Range 175 to 1000°C (347 to 1832°F): accuracy ±2%

Ethernet	
Interface	• Wired • Wi-Fi (option)
Connector type	• M12 8-pin X-coded, Female • RP-SMA, Female
Ethernet, purpose	Control, result, image, and power
Ethernet, type	1000 Mbps
Ethernet, standard	IEEE 802.3
Ethernet, communication	*See Smart Sensor and Image Streaming configurations*
Ethernet, power	Power over Ethernet, PoE IEEE 802.3af class 3
Ethernet, protocols	*See Smart Sensor and Image Streaming configurations*

Digital Input/output	
Connector type	M12 12-pin A-coded, Male (shared with external power)
Digital input	2x opto-isolated Vin(low)= 0–1.5 V, Vin(high)= 3–25 V
Digital input, purpose	*See Smart Sensor and Image Streaming configurations*
Digital output	• 3x opto-isolated, 0–30 V DC, max. 300 mA (derated to 200 mA at 60C) • Solid state opto relay • 1x dedicated as Fault output (NC)
Digital output, purpose	*See Smart Sensor and Image Streaming configurations*
Digital I/O, isolation voltage	500 VRMS

Power system	
External power	18 VDC – 56 VDC, Max 8 W
Power over Ethernet (PoE)	44 VDC – 56 VDC, Max 8.1 W
Connector type	External power: • M12 12-pin A-coded, Max 450 mA (shared with Digital I/O) PoE: • M12 8-pin X-coded, Max 350 mA

Wi-Fi	
Connector type	RP-SMA, Female
Standard	*See Wi-Fi option*

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Wi-Fi	
Antenna	*See Wi-Fi option*
Connection type	*See Wi-Fi option*

Environmental data	
Operating temperature range	• With cooling plates on at least three sides: –20 to 50°C (–4 to 122°F) • No cooling plates: –20 to 35°C (–4 to 95°F)
Storage temperature range	IEC 68-2-1 and IEC 68-2-2, –40 to 70°C (–40 to 158°F) for 16 hours
Humidity (operating and storage)	IEC 60068-2-30/24 hours, 95% relative humidity, 25–40°C (77–104°F)/2 cycles EN60068-2-38
EMC	• ETSI EN 301 489-1 (radio) • ETSI EN 301 489-17 (radio) • EN 61000-4-8 (magnetic field) • FCC 47 CFR Part 15 Class B (emission US) • ISO 13766-1 (EMC - Earth-moving and building construction machinery) • EN ISO 14982 (EMC - Agricultural and forestry machinery)
Radio spectrum	• FCC 47 CFR Part 15 Class C (2.4 GHz band US) • FCC 47 CFR Part 15 Class E (5 GHz band US) • RSS-247 (2.4 GHz and 5 GHz band Canada) • ETSI EN 300 328 V2.1.1 (2.4 GHz band EU) • ETSI EN 301 893 V2.1.1 (5 GHz band EU)
Encapsulation	IEC 60529, IP66
Shock	IEC 60068-2-27, 25 g
Vibration	• IEC 60068-2-6, 0.15 mm at 10–58 Hz and 2 g at 58–500 Hz, sinusoidal • IEC 61373 Cat 1 (Railway)
Safety	IEC 62368-1 (IT equipment audio-visual products)
Corrosion	• ISO 12944 C4 G or H • EN60068-2-11
Declaration of conformity	See: https://support.flir.com/resources/DoC

Physical data	
Weight (including lens)	0.52 kg (1.1 lb)
Size (L × W × H)	107 × 67 × 57 mm (4.21 × 2.64 × 2.24 in)
Base mount	4 × M2.5 directly onto camera or 4 × 10-32 UNF onto bottom cooling plate
Tripod mounting	UNC ¼″-20 on 2 sides
Housing material	Aluminium
Color	Black

Warranty and service	
Warranty	http://www.flir.com/warranty/

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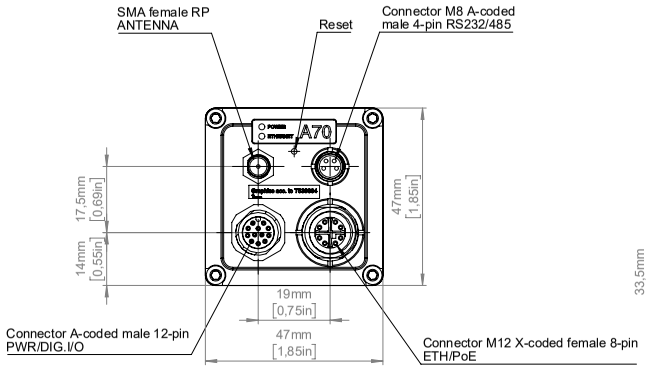
Shipping information	
Packaging, type	Cardboard box
Packaging, contents	• Infrared camera • Cooling plate • Focus adjustment tool • Ethernet cable M12 to RJ45F (0.3 m), P/N T911869ACC • Printed documentation including the username and password for log in to the web interface of the camera
Packaging, weight	0.92 kg (2.0 lb)
Packaging, size	182 × 128 × 109 mm (7.16 × 5.04 × 4.29 in)
EAN-13	7332558027684
UPC-12	845188023942
Country of origin	Sweden

Supplies & accessories:

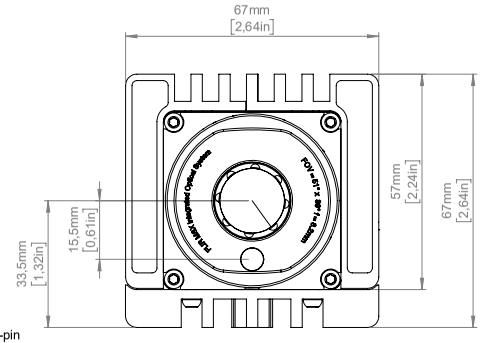
- T300292; Advanced Image Streaming configuration
- T300293; Advanced Smart Sensor configuration
- T951004ACC; Ethernet cable CAT6, 2 m/6.6 ft.
- T131367; FLIR Bridge
- T131369; FLIR Bridge Pro
- T300202; Connector cap kit
- T300268ACC; A-series connection board
- T300321ACC; Two-ball mounting bracket kit
- T911850; Antenna WLAN 2.4/5 GHz + Wi-Fi
- T911850ACC; Antenna for WLAN 2.4/5 GHz
- T911852ACC; Cable M12 to pigtail, 2 m
- T911853ACC; Cable M12 to pigtail, 10 m
- T911854ACC; Ethernet cable M12 to RJ45, 2 m
- T911855ACC; Ethernet cable M12 to RJ45, 10 m
- T911869ACC; Ethernet cable M12 to RJ45F, 0.3 m
- T911183; Gigabit PoE injector 16 W, with multi-plugs
- T911997; Tripod
- T300295; Option, Visual camera including MSX
- T300572; Option, Force password change at first-time use
- T199507; Gigabit PoE injector 15 W
- T199870; Extended Calibration Certificate for A7xx
- T199865; Standard Smart Sensor to Standard Image Streamer
- T199866; WiFi Option, excluding Antenna

Generic dimensions for all FOV

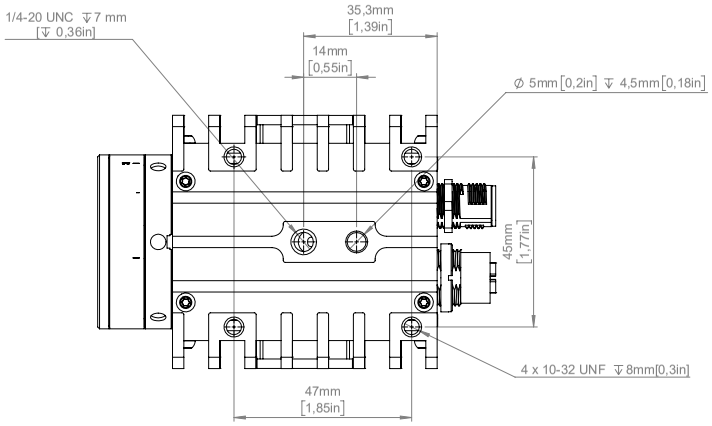
Back View

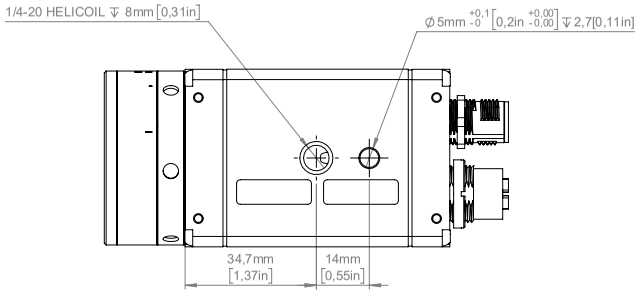


Front View

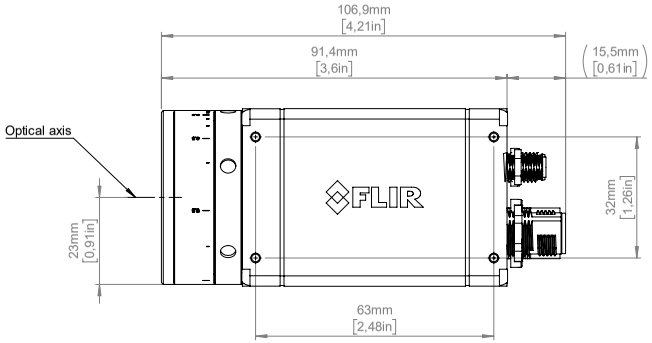


Bottom View

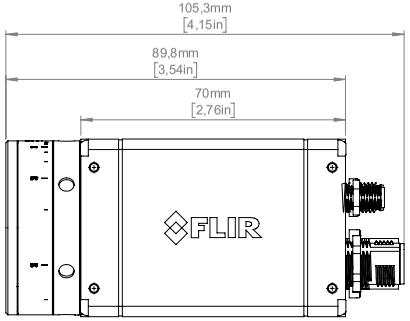




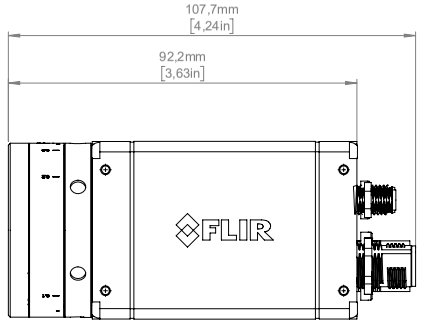
IR Lens 29 deg



IR Lens 51 deg



IR Lens 95 deg



Modified	Check	Drawn by
2021-04-15	JOHE	R&D

Denomination

Basic dimension Ax0

Size	Sheet
A2	1(1)
Scale	
1:1	
Drawing No.	Rev
T131228	A

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