

P/N: 89851-0101

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Website

<http://www.flir.com>

Customer support

<http://support.flir.com>

Disclaimer

Specifications subject to change without further notice. Camera models and accessories subject to regional market considerations. License procedures may apply. Products described herein may be subject to US Export Regulations. Please refer to exportquestions@flir.com with any questions.



| General | |
|--|--|
| When a camera is ordered the following must be selected, as a minimum: | |
| 1. one of the thermal cores: | |
| <ul style="list-style-type: none"> FLIR A50 Thermal Core FLIR A70 Thermal Core | |
| 2. one of the configurations: | |
| <ul style="list-style-type: none"> Smart Sensor configuration (FLIR A50/A70) Image Streaming configuration (FLIR A50/A70) | |
| The following options are available: | |
| <ul style="list-style-type: none"> 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: | |
| <ul style="list-style-type: none"> The <i>Advanced Smart Sensor configuration</i> and the <i>Advanced Image Streaming configuration</i> require the <i>Smart Sensor configuration (FLIR A50/A70)</i> and the <i>Image Streaming configuration (FLIR A50/A70)</i>, respectively. | |

| Imaging and optical data | |
|----------------------------|------------------|
| Infrared resolution | 464 × 348 pixels |
| Thermal sensitivity (NETD) | <50 mK |
| Field of view (FOV) | 51° × 39° |
| Minimum focus distance | 0.2 m (0.66 ft) |
| Focal length | 8.2 mm (0.32 in) |
| Spatial resolution (IFOV) | 2.1 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 |



FLIR A50 Thermal Core 51°

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| Measurement | |
|--|---|
| Camera temperature range | <ul style="list-style-type: none"> -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)) | <ul style="list-style-type: none"> Range -20 to 175°C (-4 to 347°F): <ul style="list-style-type: none"> -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 | <ul style="list-style-type: none"> Wired Wi-Fi (option) |
| Connector type | <ul style="list-style-type: none"> 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 | <i>See Smart Sensor and Image Streaming configurations</i> |
| Ethernet, power | Power over Ethernet, PoE IEEE 802.3af class 3 |
| Ethernet, protocols | <i>See Smart Sensor and Image Streaming configurations</i> |
| 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 | <i>See Smart Sensor and Image Streaming configurations</i> |
| Digital output | <ul style="list-style-type: none"> 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 | <i>See Smart Sensor and Image Streaming configurations</i> |
| 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: <ul style="list-style-type: none"> M12 12-pin A-coded, Max 450 mA (shared with Digital I/O) PoE: <ul style="list-style-type: none"> M12 8-pin X-coded, Max 350 mA |
| Wi-Fi (Option) | |
| Connector type | RP-SMA, Female |
| Standard | <i>See Wi-Fi option</i> |



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| | |
|----------------------------------|--|
| Wi-Fi (Option) | |
| Antenna | See <i>Wi-Fi option</i> |
| Connection type | See <i>Wi-Fi option</i> |
| Environmental data | |
| Operating temperature range | -20 to 50°C (-4 to 122°F), internal temperature should be kept below 70°C (158°F), all included cooling plates are recommended to be kept mounted. |
| 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 | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • ISO 12944 C4 G or H • EN60068-2-11 |
| Physical data | |
| Weight (including lens) | 0.52 kg (1.1 lb) |
| Size (L x W x H) | 107 x 67 x 57 mm (4.21 x 2.64 x 2.24 in) |
| Base mount | 4 x M2.5 directly onto camera or 4 x 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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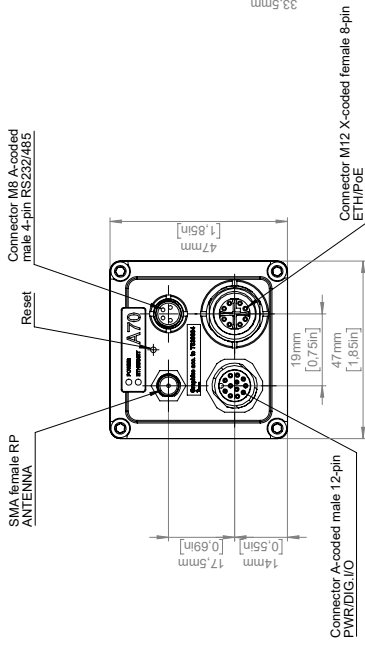
| Shipping information | |
|----------------------|---|
| Packaging, type | Cardboard box |
| Packaging, contents | <ul style="list-style-type: none">• Infrared camera• Cooling plate• Focus adjustment tool• Ethernet cable M12 to RJ45F (0.3 m), P/N T911869ACC• Printed documentation including the username 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 | 7332558027912 |
| UPC-12 | 845188024154 |
| Country of origin | Sweden |

Supplies & accessories:

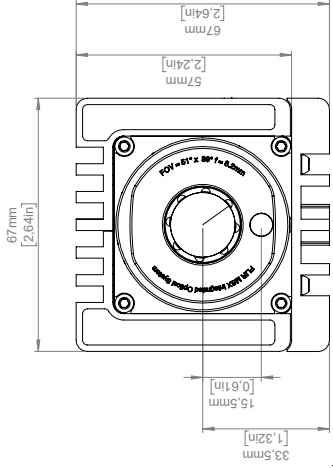
- T951004ACC; Ethernet cable CAT6, 2 m/6.6 ft.
- T130665ACC; Cooling plate
- T300075ACC; IP hood for lens
- T300202; Connector cap kit
- T300268ACC; A-series connection board
- T911850ACC; Antenna for WLAN 2.4/5 GHz
- T911852ACC; Cable M12 to pigtail, 2 m
- T911853ACC; Cable M12 to pigtail, 10 m
- T911854ACC; 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
- T199507; Gigabit PoE injector 15 W
- T199870; Extended Calibration Certificate for A7xx
- T300292; Advanced Image Streaming configuration
- T300293; Advanced Smart Sensor configuration
- T300295; Option, Visual camera including MSX
- T911850; Antenna WLAN 2.4/5 GHz + Wi-Fi
- INST-EW-0185; Extended Warranty 1 Year for A7xx
- INST-EWGM-0160; Premium Service Package for A7xx
- INST-GM-0135; General Maintenance Package for A7xx
- T199865; Standard Smart Sensor to Standard Image Streamer
- T199866; WiFi Option, excluding Antenna

Generic dimensions for all FOV

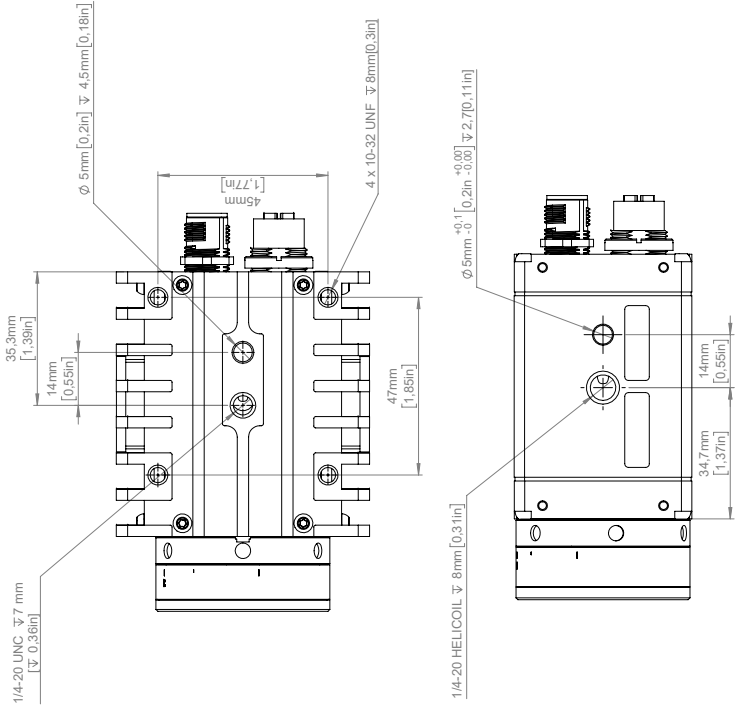
Back View



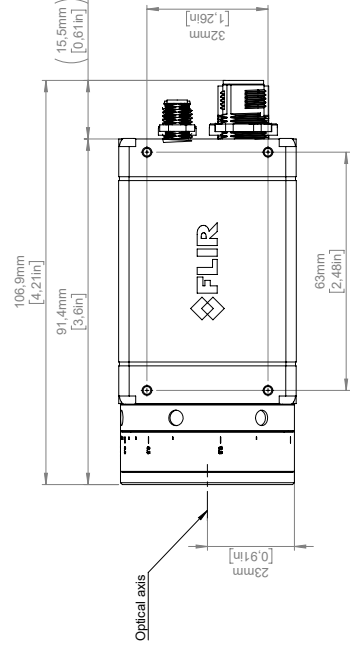
Front View



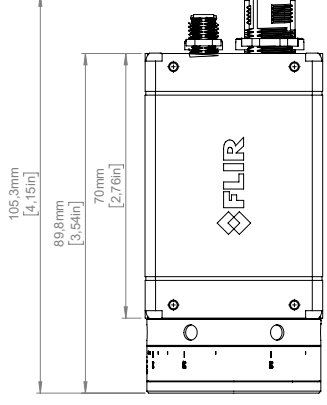
Bottom View



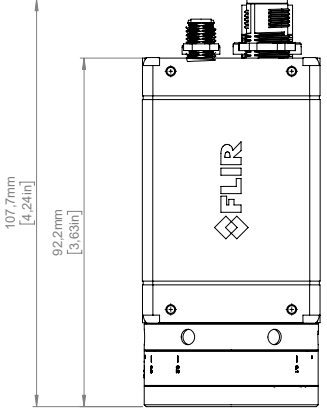
IR Lens 29 deg



IR Lens 51 deg



IR Lens 95 deg



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Täby, Sweden March 26, 2021

AQ320438

CE Declaration of Conformity – EU Declaration of Conformity

Product: FLIR AXX series including A50 and A70

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 AXX series (Product Model Name FLIR-A8990).

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

Directives

| | | |
|-----------|------------|----------------------------------|
| Directive | 2011/65/EU | RoHS and 2015/830/EU (Phtalates) |
| Directive | 2014/53/EU | Radio Equipment Directive (RED) |

Standards

| | | |
|-----------|---|---|
| Emission: | EN 55032:2015 | Electromagnetic Compatibility multimedia |
| Immunity: | EN 55035:2017 | Electromagnetic Compatibility multimedia |
| RoHS: | EN 50581:2012 | Technical documentation |
| Radio: | ETSI EN 300 328 v2.1.2 | Wideband transmission systems |
| | ETSI EN 301 893 V2.1.1 | 5 GHz RLAN |
| | ETSI EN 301 489-1 V2.2.3 | EMC for radio equipment compatibility |
| | ETSI EN 301 489-17 V3.2.4 | Broadband data transmission systems |
| Safety: | IEC 62368-1:2014 (2nd Edition) + Cor.1: 2015 + Cor.2: 2015 and EN62368-1: 2014 + AC: 2015 + A11: 2017 + AC: 2017 | Audio/video Information technology equipment |

FLIR Systems AB
Quality Assurance



Lea Dabiri
Quality Manager