FLIR A70 Thermal Core 29°

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Distribuidor Oficial

P/N: 89929-0101

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Document identity

Publ. No.: 89929-0101
Commit: 76220
Language:
Modified: 2021-04-29
Formatted: 2021-04-29

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: • 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 *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	640 × 480 pixels
Thermal sensitivity (NETD)	<50 mK
Field of view (FOV)	29° × 22°
Minimum focus distance	0.25 m (0.82 ft)
Focal length	14.3 mm (0.56 in)
Spatial resolution (IFOV)	0.84 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	12 µm

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Measurement	
Camera temperature range	• –20 to 175°C (–4 to 347°F) • –20 to 250°C (–4 to 482°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 –20 to 250°C (–4 to 482°F): ◦ –20 to 100°C (–4 to 212°F), accuracy ±2°C (±3.6°F) ◦ 100 to 250°C (212 to 482°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

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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 (Option)	
Connector type	RP-SMA, Female
Standard	*See Wi-Fi option*
Antenna	*See Wi-Fi option*
Connection type	*See Wi-Fi option*

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	• 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

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

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Physical data	
Tripod mounting	UNC ¼″-20 on 2 sides
Housing material	Aluminium
Color	Black

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

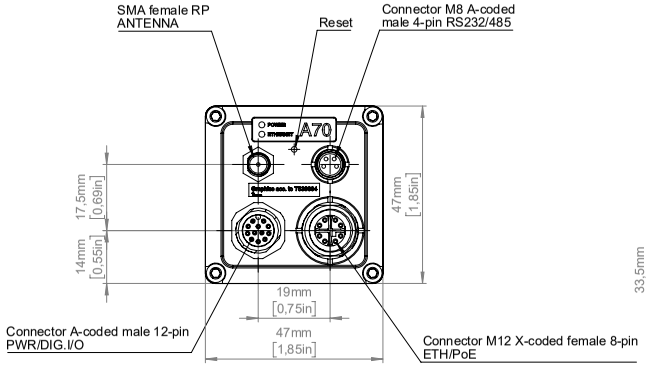
Shipping information	
Packaging, type	Cardboard box
Packaging, contents	• Infrared camera • Cooling plate • Focus adjustment tool • Ethernet cable M12 to RJ45F (0.3 m), P/N T911869ACC • Printed documentation including the username and password for log in to the web interface of the camera
Packaging, weight	0.92 kg (2.0 lb)
Packaging, size	182 × 128 × 109 mm (7.16 × 5.04 × 4.29 in)
EAN-13	7332558027929
UPC-12	845188024161
Country of origin	Sweden

Supplies & accessories:

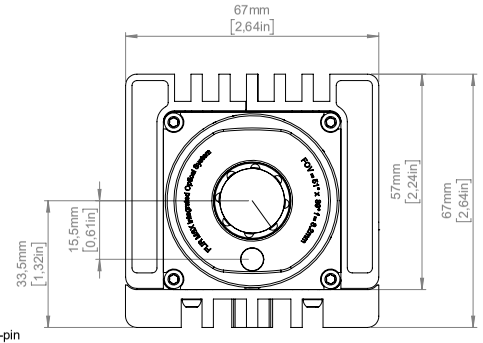
- T951004ACC; Ethernet cable CAT6, 2 m/6.6 ft.
- T130665ACC; Cooling plate
- T300075ACC; IP hood for lens
- T300202; Connector cap kit
- T300268ACC; A-series connection board
- T911850ACC; Antenna for WLAN 2.4/5 GHz
- T911852ACC; Cable M12 to pigtail, 2 m
- T911853ACC; Cable M12 to pigtail, 10 m
- T911854ACC; 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

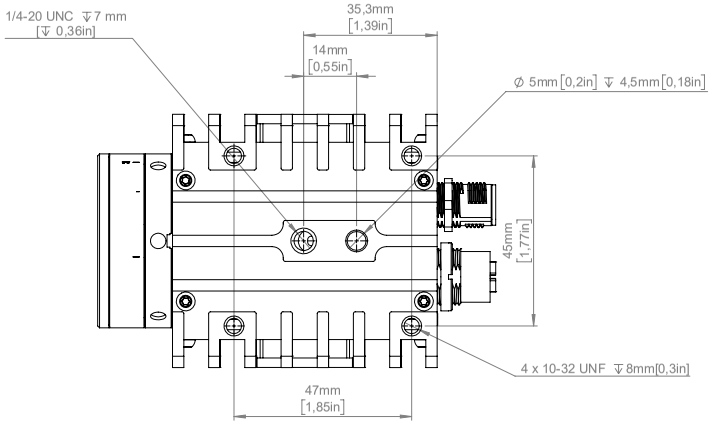
Back View

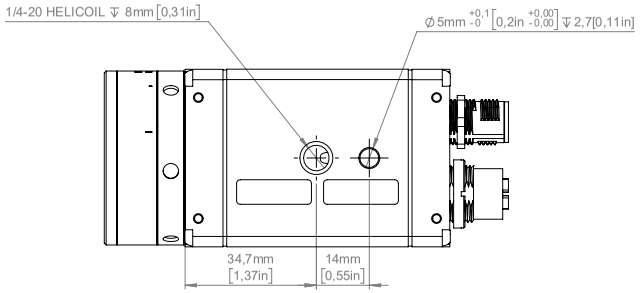


Front View

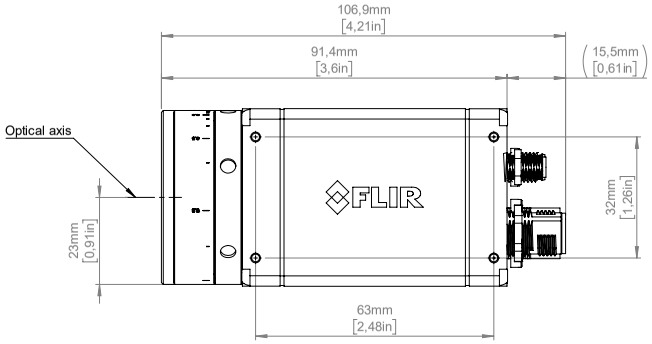


Bottom View

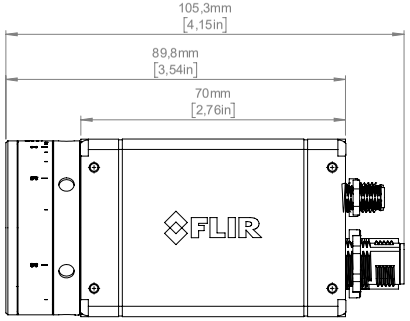




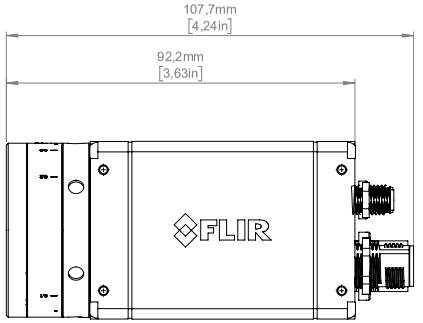
IR Lens 29 deg



IR Lens 51 deg



IR Lens 95 deg



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

Denomination

Basic dimension Ax0

FLIR

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

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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

FLIR A70 Thermal Core 51°

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Document identity

Publ. No.: 89951-0101
Commit: 76221
Language:
Modified: 2021-04-29
Formatted: 2021-04-29

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http://www.flir.com

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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 *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	640 × 480 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)	1.5 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	12 µm

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Measurement	
Camera temperature range	• –20 to 175°C (–4 to 347°F) • –20 to 250°C (–4 to 482°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 –20 to 250°C (–4 to 482°F): ◦ –20 to 100°C (–4 to 212°F), accuracy ±2°C (±3.6°F) ◦ 100 to 250°C (212 to 482°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

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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 (Option)	
Connector type	RP-SMA, Female
Standard	*See Wi-Fi option*
Antenna	*See Wi-Fi option*
Connection type	*See Wi-Fi option*

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	• 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

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

FLIR A70 Thermal Core 51°

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Physical data	
Tripod mounting	UNC ¼″-20 on 2 sides
Housing material	Aluminium
Color	Black

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

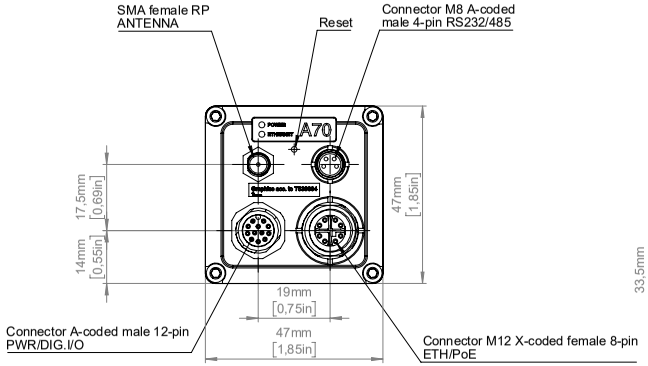
Shipping information	
Packaging, type	Cardboard box
Packaging, contents	• Infrared camera • Cooling plate • Focus adjustment tool • Ethernet cable M12 to RJ45F (0.3 m), P/N T911869ACC • Printed documentation including the username and password for log in to the web interface of the camera
Packaging, weight	0.92 kg (2.0 lb)
Packaging, size	182 × 128 × 109 mm (7.16 × 5.04 × 4.29 in)
EAN-13	7332558027936
UPC-12	845188024178
Country of origin	Sweden

Supplies & accessories:

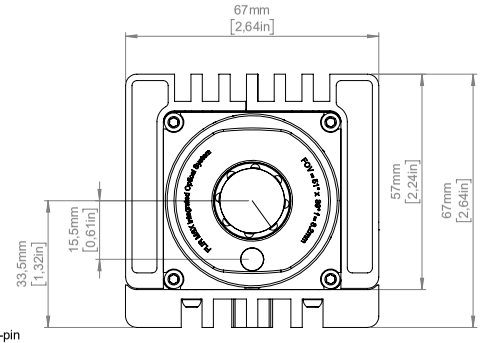
- T951004ACC; Ethernet cable CAT6, 2 m/6.6 ft.
- T130665ACC; Cooling plate
- T300075ACC; IP hood for lens
- T300202; Connector cap kit
- T300268ACC; A-series connection board
- T911850ACC; Antenna for WLAN 2.4/5 GHz
- T911852ACC; Cable M12 to pigtail, 2 m
- T911853ACC; Cable M12 to pigtail, 10 m
- T911854ACC; 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

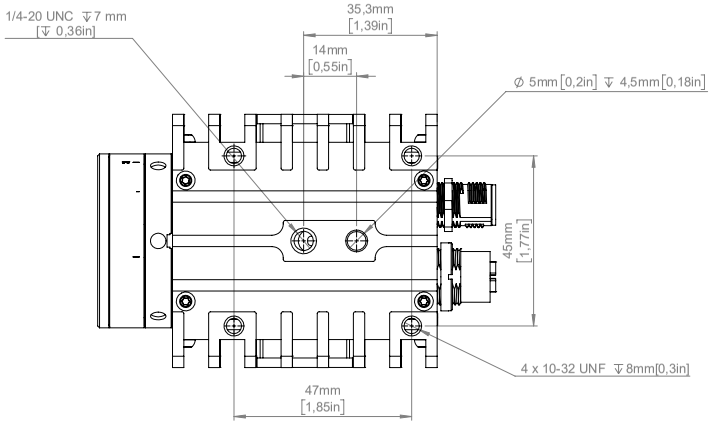
Back View

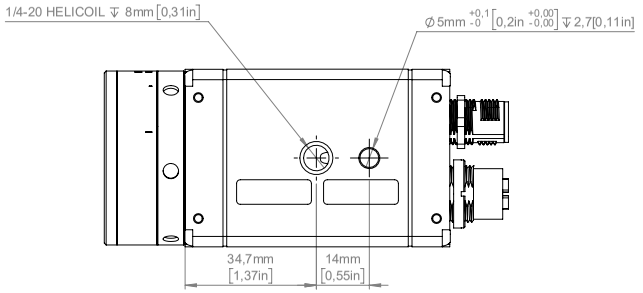


Front View

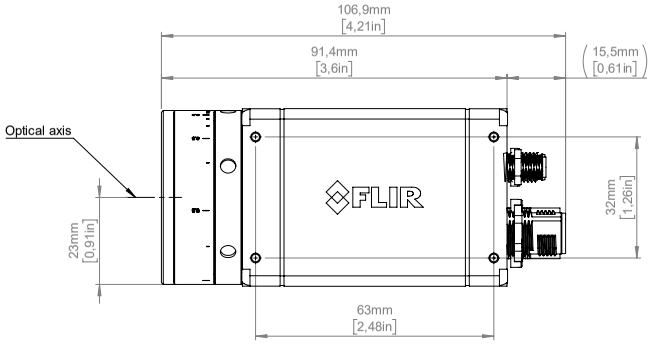


Bottom View

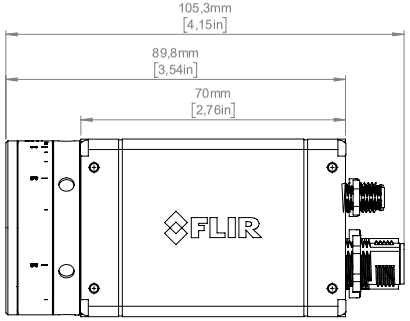




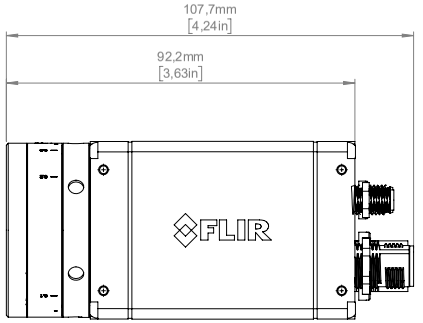
IR Lens 29 deg



IR Lens 51 deg



IR Lens 95 deg



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

Denomination

Basic dimension Ax0

FLIR

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

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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

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Quality Assurance

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