

P/N: 89895-0201

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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	464 × 348 pixels
Thermal sensitivity (NETD)	<45 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
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%
Video/Radiometric streaming RTSP	
Protocol	RTSP
Unicast	Yes
Multicast	Yes
Multiple image streams	Yes
Video streaming	
Image quality	Bit rate set through Camera web
Video streaming, Image source 0:	
Resolution (source 0)	640 × 480 pixels



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Video/Radiometric streaming RTSP	
Contrast enhancement	FSX / Histogram equalization (IR only)
Overlay (source 0)	With / Without
Image source (source 0)	Visual / IR / MSX
Pixel format (source 0)	YUV411
Encoding (source 0)	H.264 / MPEG4 / MJPEG
Video streaming, Image source 1:	
Resolution (source 1)	1280 × 960 pixels
Overlay (source 1)	No
Image source (source 1)	Visual
Pixel format (source 1)	YUV411
Encoding (source 1)	H.264 / MPEG4 / MJPEG
Radiometric streaming	
Resolution (radiometric)	464 × 348 pixels
Source	IR
Pixel format (radiometric)	MONO 16
Encoding (radiometric)	<ul style="list-style-type: none"> Compressed JPEG-LS FLIR Radiometric
Video/Radiometric streaming GVSP (GigE Vision)	
Protocol	GVSP
Unicast	Yes
Multicast	Yes
Multiple image streams	No, 1 stream only
Video streaming	
Video streaming, Image source 0:	
Resolution (source 0)	640 × 480 pixels
Contrast enhancement	FSX / Histogram equalization (IR only)
Overlay (source 0)	With / Without
Image source (source 0)	Visual / IR / MSX
Pixel format (source 0)	YUV422 or MONO 8
Encoding (source 0)	Un-compressed
Radiometric streaming	
Resolution (radiometric)	464 × 348 pixels
Source	IR
Pixel format (radiometric)	MONO 16
Encoding (radiometric)	<ul style="list-style-type: none"> Temperature linear FLIR Radiometric Compressed JPEG-LS
Ethernet	
Interface	<ul style="list-style-type: none"> Wired Wi-Fi
Connector type	<ul style="list-style-type: none"> M12 8-pin X-coded, Female RP-SMA, Female
Ethernet, purpose	Control, result, image, and power



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Ethernet	
Ethernet, type	1000 Mbps
Ethernet, standard	IEEE 802.3
Ethernet, communication	<ul style="list-style-type: none"> GigE Vision ver. 1.2 Client API GenICam compliant TCP/IP socket-based FLIR proprietary
Ethernet, power	Power over Ethernet, PoE IEEE 802.3af class 3
Ethernet, protocols	<ul style="list-style-type: none"> IEEE 1588 SNMP TCP, UDP, SNTP, RTSP, RTP, HTTP, ICMP, IGMP, sftp (server), FTP (client), SMTP, DHCP, MDNS (Bonjour), uPnP

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	<ul style="list-style-type: none"> NUC NUC disable Image TAG (Start, Stop, General) Image flow control (acc. SFNC 2.4)
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	<ul style="list-style-type: none"> Programmatically set Fault (NC)
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

RS-232/485 serial interface	
Connector type	M8 A-coded, Male
Prerequisite for use	ONVIF must be initiated.
Serial communication, purpose	Pan & Tilt control
Serial communication, standard	Pelco D
Serial communication, HW interface	RS232 and RS485 exclusively
Scanlist support	Yes

Wi-Fi	
Connector type	RP-SMA, Female
Standard	IEEE802.11a/b/g/n



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Wi-Fi	
Antenna	Dipole antenna 2.4/5 GHz (gain: maximum 2 dBi)
Connection type	Peer to peer (ad hoc) or infrastructure (network)
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
Shipping information	
Packaging, type	Hard case
Packaging, contents	<ul style="list-style-type: none"> Camera with Image Streaming configuration and 95° lens Hard case Ethernet cable M12 to RJ45, 2 m Ethernet cable M12 to RJ45F, 0.3 m Ethernet cable CAT6, 2 m/6.6 ft Cable M12 to pigtail, 2 m Gigabit PoE injector 16 W, with multi-plugs Antenna WLAN 2.4/5 GHz + Wi-Fi Cooling plate Focus adjustment tool Visual camera including MSX Research Studio - 1 Year Subscription (Online Activation) Printed documentation including the username and password for log in to the web interface of the camera
Packaging, weight	2.83 kg (6.24 lb)
Packaging, size	370 × 290 × 149 mm (14.6 × 11.4 × 5.87 in)



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Shipping information	
EAN-13	7332558028070
UPC-12	845188024338

Supplies & accessories:

- T951004ACC; Ethernet cable CAT6, 2 m/6.6 ft.
- 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
- 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