

## P/N: T300313

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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](mailto:exportquestions@flir.com) with any questions.



### General

When a camera is ordered the following must be selected, as a minimum:

1. one of the camera bodies:
  - FLIR A400 Thermal Core
  - FLIR A500 Thermal Core
  - FLIR A700 Thermal Core
2. one of the configurations:
  - Smart Sensor configuration
  - Image Streaming configuration
3. one (or several) of the lenses:
  - IR lens, f=70 mm (6°) with case
  - IR lens, f=29 mm (14°)
  - IR lens, f=17 mm (24°)
  - IR lens, f=10 mm (42°)
  - IR lens Dual FOV, f=17/29 mm (24°/14°)

For orders of more than one lens, select the primary lens to be mounted on the Thermal Core camera body at delivery. The additional lenses are then delivered in separate boxes. Due to its size, the IR lens, f=70 (6°), is always delivered in a case.

Please note that other P/Ns are used when the lenses are ordered as accessories.

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
- Option, Macro mode 50/71/101 µm for 24°

### Imaging and optical data

Infrared resolution	Depending on Thermal Core used; see Thermal Core specification
Thermal sensitivity (NETD)	Depending on Thermal Core used; see Thermal Core specification
Field of view (FOV)	Depending on lens used; see lens specification
Minimum focus distance	Depending on lens used; see lens specification
Focal length	Depending on lens used; see lens specification
Spatial resolution (IFOV)	Depending on lens used; see lens specification
Lens identification	Automatic
f-number	Depending on lens used; see lens specification
Image frequency	30 Hz
Focus	<ul style="list-style-type: none"><li>• One-shot contrast</li><li>• Motorized</li><li>• Manual</li></ul>

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<b>Detector data</b>	
Focal plane array/spectral range	Uncooled microbolometer/7.5–14 µm
Detector pitch	<i>Depending on Thermal Core used; see Thermal Core specification</i>
<b>Measurement</b>	
Camera temperature range	<i>Depending on Thermal Core used; see Thermal Core specification</i>
Object temperature range and accuracy (for ambient temperature 15–35°C (59–95°F))	<i>Depending on Thermal Core used; see Thermal Core specification</i>
<b>Measurement analysis</b>	
Standard functions	N/A
Automatic hot/cold detection	N/A
Schedule response	N/A
Measurement presets	N/A
Atmospheric transmission correction	Based on inputs of distance, atmospheric temperature, and relative humidity
Lens transmission correction	Automatic, based on signals from internal sensors
Emissivity correction	Variable from 0.01 to 1.0
Reflected apparent temperature correction	Based on input of reflected temperature
External optics/windows correction	Based on input of optics/window transmission and temperature
Measurement corrections	Global object parameters
Measurement frequency	N/A
Measurement result read-out	N/A
<b>Configuration of camera</b>	
Web interface	Yes
<b>Video/Radiometric streaming RTSP</b>	
Protocol	RTSP
Unicast	Yes
Multicast	Yes
Multiple image streams	Yes
<b>Video streaming</b>	
Image quality	Bit rate set through Camera web
<b>Video streaming, Image source 0:</b>	
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)	YUV411
Encoding (source 0)	H.264 / MPEG4 / MJPEG
<b>Video streaming, Image source 1:</b>	
Resolution (source 1)	1280 × 960 pixels
Overlay (source 1)	No
Image source (source 1)	Visual

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<b>Video/Radiometric streaming RTSP</b>	
Pixel format (source 1)	YUV411
Encoding (source 1)	H.264 / MPEG4 / MJPEG
<b>Radiometric streaming</b>	
Resolution (radiometric)	<i>Depending on Thermal Core used; see Thermal Core specification</i>
Source	IR
Pixel format (radiometric)	MONO 16
Encoding (radiometric)	<ul style="list-style-type: none"> <li>Compressed JPEG-LS</li> <li>FLIR Radiometric</li> </ul>
<b>Video/Radiometric streaming GVSP (GigE Vision)</b>	
Protocol	GVSP
Unicast	Yes
Multicast	Yes
Multiple image streams	Yes, by using the FLIR Atlas desktop SDK both IR and Visual image streams can be viewed simultaneously (dual streaming).
<b>Video streaming</b>	
<b>Video streaming, Image source 0:</b>	
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
<b>Radiometric streaming</b>	
Resolution (radiometric)	<i>Depending on Thermal Core used; see Thermal Core specification</i>
Source	IR
Pixel format (radiometric)	MONO 16
Encoding (radiometric)	<ul style="list-style-type: none"> <li>Temperature linear</li> <li>FLIR Radiometric</li> </ul>
<b>Ethernet</b>	
Interface	<ul style="list-style-type: none"> <li>Wired</li> <li>Wi-Fi (option)</li> </ul>
Connector type	<ul style="list-style-type: none"> <li>M12 8-pin X-coded, Female</li> <li>RP-SMA, Female</li> </ul>
Ethernet, purpose	Control, result, image, and power
Ethernet, type	1000 Mbps
Ethernet, standard	IEEE 802.3
Ethernet, communication	<ul style="list-style-type: none"> <li>GigE Vision ver. 1.2</li> <li>Client API GenICam compliant</li> <li>TCP/IP socket-based FLIR proprietary</li> </ul>

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<b>Ethernet</b>	
Ethernet, power	Power over Ethernet, PoE IEEE 802.3af class 3
Ethernet, protocols	<ul style="list-style-type: none"> <li>IEEE 1588</li> <li>SNMP</li> <li>TCP, UDP, SNTP, RTSP, RTP, HTTP, ICMP, IGMP, sftp (server), FTP (client), SMTP, DHCP, MDNS (Bonjour), uPnP</li> </ul>
<b>Digital Input/output</b>	
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"> <li>NUC</li> <li>NUC disable</li> <li>Image TAG (Start, Stop, General)</li> <li>Image flow control (acc. SFNC 2.3) <ul style="list-style-type: none"> <li>Single frame (on trigg)</li> <li>Multiframe (on trigg)</li> <li>Continuous</li> <li>Frame rate</li> <li>ROI</li> </ul> </li> </ul>
Digital output	<ul style="list-style-type: none"> <li>3x opto-isolated, 0–30 V DC, max. 300 mA (derated to 200 mA at 60C)</li> <li>Solid state opto relay</li> <li>1x dedicated as Fault output (NC)</li> </ul>
Digital output, purpose	<ul style="list-style-type: none"> <li>Programmatically set</li> <li>Fault (NC)</li> </ul>
Digital I/O, isolation voltage	500 VRMS
<b>RS-232/485 serial interface</b>	
Connector type	M8 A-coded, Male
Prerequisite for use	<i>See Advanced Image Streaming configuration</i>
Serial communication, purpose	<i>See Advanced Image Streaming configuration</i>
Serial communication, standard	<i>See Advanced Image Streaming configuration</i>
Serial communication, HW interface	<i>See Advanced Image Streaming configuration</i>
Scanlist support	<i>See Advanced Image Streaming configuration</i>
<b>Wi-Fi</b>	
Connector type	RP-SMA, Female
Standard	<i>See Wi-Fi option</i>
Antenna	<i>See Wi-Fi option</i>
Connection type	<i>See Wi-Fi option</i>
<b>Warranty and service</b>	
Warranty	<a href="http://www.flir.com/warranty/">http://www.flir.com/warranty/</a>