



Flir A40/50/A70

Compact Thermal Image Streaming Camera



Key Features:

- High-accuracy thermal imaging: Capture detailed temperature data with up to 640×480 resolution and $\pm 2^\circ\text{C}$ accuracy, with radiometric output from every pixel
- Flexible integration and streaming: Control and stream thermal data over Ethernet with GigE Vision and GenICam for easy integration into custom systems and third-party software
- Rugged, compact industrial design: IP66-rated housing with a lightweight form factor and flexible mounting options for reliable performance in harsh environments

Main Applications:

- Process Control & Automation: Monitor thermal characteristics in real time to optimize production processes, improve consistency, and reduce downtime.
- Quality Assurance & Inspection: Identify defects, inconsistencies, or overheating components during manufacturing to improve product quality and yield
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Image & Optical Data	Standard Configuration	Advanced Configuration
IR resolution	A40: 320 × 240, A50: 464 × 348, A70: 640 × 480	
Visual Resolution	1280 × 960 pixels (optional)	
Thermal Resolution	35 mK	
Focus	Fixed, adjustable with included focus tool	
Spatial Resolution (IFOV)	A40: 29°: 1.7 mrad/pixel, 51°: 3.0 mrad/pixel, 95°: 5.8 mrad/pixel	
	A50: 29°: 1.2 mrad/pixel, 51°: 2.1 mrad/pixel, 95°: 4.0 mrad/pixel	
	A70: 29°: 0.84 mrad/pixel, 51°: 1.5 mrad/pixel, 95°: 2.9 mrad/pixel	
FOV Options	29°, 51°, 95°	
Detector Pitch	A40: 25 μm, A50: 17 μm, A70: 12 μm	
Spectral Range	7.5–14.0 μm	
Frame Rate	30 Hz	
Measurement		
Object temperature range	A40: -20°C to 175°C (-4°F to 347°F) 175°C to 1000°C (347°F to 1832°F)	
	A50: -20°C to 175°C (-4°F to 347°F) 175°C to 1000°C (347°F to 1832°F)	
	A70: -20°C to 175°C (-4°F to 347°F) -20°C to 250°C (-4°F to 482°F) 175°C to 1000°C (347°F to 1832°F)	

Accuracy	±2°C (±3.6°F) or ±2% of reading, for ambient temperature 15°C to 35°C (59°F to 95°F) and object temperature above 0°C (32°F)	
Video Streaming, RTSP Protocol	Standard Configuration	Advanced Configuration
Unicast	Yes	
Multicast	Yes	
Radiometric RTSP	No	Compressed JPEG-LS (Flir Radiometric)
Multiple Image Streams	Yes, visual camera option needed (P/N T300295)	
Video Stream 0		
Streaming Resolution	640 × 480 pixels	
Source	Visual / IR / MSX® / FSX® (visual camera is optional)	
Overlay	No	
Encoding	H.264, MPEG4, or MJPEG	
Video Stream 1		
Streaming Resolution	1280 × 960 pixels	
Source	Visual (visual camera is optional)	
Overlay	No	
Encoding	H.264, MPEG4, or MJPEG	

For more information visit:

https://www.flir.com/products/a40_a50_a70-image-streaming/



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Video Streaming, RTSP Protocol	Standard Configuration	Advanced Configuration
Unicast	Yes	
Multicast	Yes	
Radiometric RTSP	No	Compressed JPEG-LS (Flir Radiometric)
Multiple Image Streams	Yes, visual camera option needed (P/N T300295)	
Video streaming, GVSP (GigE Vision Streaming Protocol)		
Unicast	Yes	
Multicast	Yes	
Dual Video Streams	No (either IR, Visual, MSX, FSX or Radiometric 16 bit)	
Visual Resolution	640 × 480	
Pixel Formats	YUV411, MONO8, MONO16	
Radiometric Resolution	A40: 320 × 240; A50: 464 × 348; A70: 640 × 480	
Temperature Linear 16-bit	Yes	
Compressed JPEG-LS	No	Yes
Ethernet		
Ethernet Communication	GigE Vision, GenICam (SFNC 2.4)	
Connector Types	M12 8-pin X-coded, female; RP-SMA, female	
Ethernet Interface	Wired, Wi-Fi (optional)	
Ethernet Power	Power over Ethernet, PoE IEEE 802.3af class 3	
Ethernet Protocols	IEEE 1588, SNMP, TCP, UDP, SNTP, RTSP, RTP, HTTP, ICMP, IGMP, sftp (server), FTP (client), SMTP, DHCP, MDNS (Bonjour), uPnP	

Ethernet Standard	IEEE 802.3
Ethernet Type	1000 Mbps
Encoding	H.264, MPEG4, or MJPEG
Digital Input/Output	
Connector Type	M12 Male 12-pin A-coded (shared with external power)
Digital Input	2× opto-isolated, Vin (low) = 0 to 1.5 V, Vin (high) = 3 to 25 V
Digital Output	3× opto-isolated, 0 to 48 V DC, max. 350 mA (derated to 200 mA at 60°C). Solid-state opto relay, 1× dedicated as fault output (NC)
Power	
Power Consumption	7.5 W at 24 V DC typical, 7.8 W at 48 V DC typical, 8.1 W at 48 V PoE typical
External Power Operation	24/48 V DC 8 W max
External Voltage	Allowed range 18 V to 56 V DC
Power Connection	M12 12-pin A-coded, male (shared with Digital I/O)
Wi-Fi	
Connector Type	Female RP-SMA

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