FLIR A40™

Compact Thermal Smart Sensor Camera

www.flir.com/products/A40

Key Features

- Accurate and stable temperature measurement for 24/7 monitoring, when higher resolution is not required
- Narrow field of view option for system integrators
- Easy integration to existing IT systems with support for Industrial protocols, such as modbus TCP, EtherNet/IP, MQTT and REST API
- Small and rugged with various connections including: M12 Ethernet, Digital I/O, RS-232/485
- IP66 rated with diamond-like carbon coating on the lens for durability.

Main Applications

- On-camera analytics and alarm capabilities for condition monitoring and early fire detection
- Quickly access thermal characteristics to catch potential failures, and detect fires before signs of smoke or flames
- Simplify integration efforts with thermal smart sensors that communicate with standard industrial protocols and video management systems

SPECIFICATIONS

Image and Optical Data	
IR Resolution	320 × 240
Visual Resolution	1280 × 960
Thermal Resolution	29°: <35 mK, 51°: <35 mK, 95°: <35 mK
Focus	Fixed, adjustable with included focus tool
Spatial Resolution (IFOV)	29°: 1.7 mrad/pixel, 51°: 3.0 mrad/pixel, 95°: 5.8 mrad/pixel
FOV Options	29°, 51°, 95°
Detector Pitch	25 µm
Spectral Range	7.5–14.0 µm
Frame Rate	30 Hz
Measurement	
Object temperature range	-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)
Measurement Analysis	
Standard Functions	10 Spotmeters, 10 Boxes or Polygons, 3 Deltas (difference any value/reference/external lock), 2 Isotherm (above/below/interval), 2 Iso-coverage, 2 Lines, 1 Polyline, 1 Reference temperature

Specifications subject to change. For the most up-to-date specifications, please visit flir.com.

For technical or sales support, please visit:
www.flir.com/about/general-inquiries

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Measurement Analysis Continued	
Automatic Hot/Cold Detection	Max./Min. temperature value and position shown within Box
Measurement Frequency	Up to 10 Hz
Measurement Result Read-out	EtherNet/IP (poll), Modbus TCP server/client (poll/push), MQTT (push), REST API (read/write), Measurements and Still image (radiometric JPEG, visual 640 × 480, visual 1280 × 960), Web interface
Alarm	
Alarm Function	On any selected measurement function, digital in, and internal camera temperature
Alarm Output	Digital out, e-mail (SMTP) (push), EtherNet/IP (pull), file transfer (FTP) (push), Modbus TCP server/client (poll/push), MQTT (push), RESTful API (pull), and store image or video
Video Streaming, RTSP	
Unicast	Yes
Multicast	Yes
Radiometric RTSP	Compressed JPEG-LS (FLIR Radiometric)
Multiple Image Streams	Yes
Video Stream 0	
Streaming Resolution	320 × 240
Source	Visual / IR / MSX® (*Not available in the 95° version) / FSX®
Contrast Enhancement	FSX® / Histogram equalization (IR only)
Overlay	With/Without
Encoding	H.264, MPEG4, or MJPEG
Video Stream 1	
Streaming Resolution	1280 × 960
Source	Visual
Overlay	No
Encoding	H.264, MPEG4, or MJPEG
Ethernet	
Interface	Wired
Ethernet Connector Types	M12 8-pin X-coded, female
Ethernet Type & Standard	1000 Mbps, IEEE 802.3
Ethernet Power	Power over Ethernet, PoE IEEE 802.3af class 3
Ethernet Protocols	EtherNet/IP, IEEE 1588, Modbus TCP, MQTT, SNMP, TCP, ONVIF, UDP, SNTP, RTSP, RTP, HTTP, HTTPS, ICMP, IGMP, sftp (server), FTP (client), SMTP, DHCP, and MDNS (Bonjour), uPnP

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

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