



COMPACT THERMAL IMAGE STREAMING CAMERA

FLIR A50/A70



FLIR A50 and A70 Thermal Image Streaming cameras are the right choice for users who want camera control capabilities and image streaming over Ethernet, as well as flexibility to perform analytics and raw data collection on thermal characteristics using preferred software applications. Thermal image and data output can easily be integrated into custom solutions with the GigE Vision and GenICam support. With options for Wi-Fi, an integrated visual camera, compressed radiometric image streaming, and ONVIF S compatibility, these small and lightweight fixed-focus automation cameras will optimize process control and quality assurance to improve yield, product quality, through-put time, and lower costs.



IMPROVE PRODUCTION AND QUALITY

Quickly access thermal characteristics during production or QA processes to optimize production settings and product quality

- Accurately measure temperatures with up to 640 × 480 (307,200 pixels) thermal resolution and ±2°C accuracy
- Reveal thermal detail with low-noise imagery and data
- Extract temperatures from each pixel without need for calculation using temperature linear mode and monochrome 16-bit image streaming
- Identify targets easier using optional simultaneous thermal and visible image streaming from a single camera with MSX®



TROUBLE-FREE INTEGRATION

Simplify integration efforts with non-proprietary industry standard connectivity, data and image streaming, and camera control

- GigE Vision and GenICam compliant for camera control and thermal/visual image video streaming into third-party machine vision applications
- Full support for compressed radiometric streaming using FLIR Atlas SDK (Advanced Configuration only)
- SNMP trap and advanced firewall protection allows multiple network devices to securely operate together
- Simple configuration via standard web browser



RUGGED, COMPACT, EASY INSTALLATION

Meet the demands of industrial environments and installations

- Built with an IP66 rating to withstand harsh environmental conditions
- Ensure operation in dynamic settings thanks to heavy-duty M8/12 connectors
- Easily install the compact, lightweight camera in any location, with multiple mounting options

SPECIFICATIONS

| Image & Optical Data | Standard Configuration | Advanced Configuration |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| IR resolution | 640 × 348 (A50), 640 × 480 (A70) | |
| Visual Resolution | 1280 × 960 pixels (optional) | |
| Thermal Resolution | A70: 29°: <45 mK, 51°: <45 mK, 95°: <60 mK A50: 29°: <35 mK, 51°: <35 mK, 95°: <45 mK | |
| Focus | Fixed, adjustable with included focus tool | |
| Spatial Resolution (IFOV) | 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 | A50: 17 µm, A70: 12 µm | |
| Spectral Range | 7.5–14.0 µm | |
| Frame Rate | 30 Hz | |

Measurement

| | | |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Object temperature range | -20°C to 175°C (-4°F to 347°F) 175°C to 1000°C (347°F to 1832°F) | -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) |
| Contrast Enhancement | FSX® / Histogram equalization (IR only) |
| Overlay | With/Without |
| 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 |

| 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, MON08, MON016 |
| Radiometric Resolution | A50: 464 × 348, A70: 640 × 480 |
| Temperature Linear 16-bit | Yes |
| Compressed JPEG-LS | No |

Ethernet

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|------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| 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 |

Digital Input/Output

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|----------------|------------------------------------------------------------------------------------------------------------------------------------|
| 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 |
|----------------|---------------|

NASDAQ: FLIR

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1.800.561.8187

www.itm.com

information@itm.com