



Mess- und Prüftechnik. Die Experten.

Ihr Ansprechpartner / dataTec AG
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Flir Si2a-LD

Industrial Fixed Acoustic Imaging Camera for Leak Detection



Key Features:

- Provides continuous 24/7 condition monitoring, enabling early detection compressed air and gas leaks.
- Quantifies leak rate costs for compressed air, ammonia, argon, carbon dioxide, helium, hydrogen, methane, natural gas, and nitrogen, featuring an IP66 with VESA mounting options for reliable, flexible installations outside hazardous zones and in harsh industrial environments.
- AI enhanced detection and analysis that delivers accurate results with minimal operator intervention and enables enterprise ready system integration and data management.

Main Applications:

- Early detection of compressed air leaks across distribution pipework, valves, fittings, and connections to reduce energy waste, lower operating costs, and eliminate the hidden losses that conventional monitoring cannot identify.
- Continuous monitoring of gas systems and associated infrastructure to identify fugitive emissions, pressurised leaks, and seal degradation before they become a safety risk.

Specifications

Acoustic Specifications	
Acoustic measurements	124 low-noise MEMS microphones, real-time sound visualization
Detection threshold	20 kHz: -19.5 dB 35 kHz: -11.2 dB 50 kHz: -9.8 dB 80 kHz: 12.2 dB 100 kHz: 22.8 dB
Bandwidth	2-130 kHz
Directional resolution	From 1° up to 0.125°
Operating distance	From 0.3 m (1.0 ft) up to 200 m (656 ft)
Leak localization and detection	Automatic leak recognition including estimated leak size and annual cost
Leak rate detection threshold	0.0032 l/min from 2.5 m, 0.0044 l/min from 6 m
Gases detected	Detects all gases provided they are under sufficient pressure. Quantifies leak rate costs for compressed air, ammonia, argon, carbon dioxide, helium, hydrogen, methane, natural gas, and nitrogen.
Imaging and Optical	
Digital camera	12 MP Color
Camera field of view	75° diagonal
Video frame rate	Streaming: 15 fps Snapshots: 30 fps
Video image resolution	960 × 540 streaming
Aspect ratio	16:9

Communication and Connectivity	
Network interfaces	M12 x-code 8-pin Ethernet, PoE IEEE 802.3at
Wireless connectivity	Wi-Fi 2.4 GHz / 5 GHz, IEEE 802.11 b/g/n/ac
Supported protocols	TCP/IP, RTSP MQTT, SMTP, FTP
Data transfer	Video streaming bandwidth: 7.5 Mbps (typical)
Firmware updates	Via configurator tool web interface
Digital I/O	2-pin output / 2-pin input
Current loop output	4-20 mA, 8 discrete levels (2 mA resolution)
System Integration and Event Handling	
API	HTTP, REST (documentation in the acoustic configurator tool)
Event Triggering	Leak detection and minimum leak size / Leak detection and cost estimation / dB SPL Threshold
Data Formats	
Export file	.nlz (compatible with Flir Thermal Studio)
Data messages	.json
Analysis and Reporting	
Offline	Flir Thermal Studio (desktop software)
Web Interface	Acoustic configurator tool
Power	
Primary power source	PoE+ Type 2 (30 W)



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Specifications, continued

Power consumption	18 W typical, 25.5 W maximum
DC voltage range	42.5–57 V DC
Environmental Data	
Operating temperature range	-20°C to 50°C (-4°F to 122°F)
Storage temperature range	-20°C to 50°C (-4°F to 122°F)
Relative humidity	0–90% recommended
EMC	FCC CFR 47 Part 15 Subpart B Class B, FCC CFR47 Part 15 Subpart C/E, FCC Rule §15.207, §15.247(d), §15.407(b) EN 55032, EN 55035, EN 301 489-1/-17, EN 300 328, EN 301 893
Ingress protection	IP66
Safety	IEC 62368-1
Declaration of conformity	See: https://support.flir.com/resources/DoC
Physical Data	
Camera size	182 × 171 × 79 mm (7.2 × 6.8 × 3.1 in)
Camera weight	~ 1.4 kg (3.1 lb)
Mounting dimensions	VESA mount: 100 × 100 4 × M4, thread 10 mm
Warranty and Service	
Warranty	http://www.flir.com/warranty/

Shipping Information	
Packaging, type	Cardboard box
Packaging, contents	Camera Wi-Fi Antenna (Included with models that support Wi-Fi) Printed documentation including the username and password for log in to the web interface of the camera License card: Flir Si-series Plugin for Flir Thermal Studio, Perpetual license
Packaging, weight	1.8 kg (4 lb)
Packaging, size	362 × 230 × 109 mm (14.2 × 9.1 × 4.3 in)
EAN-13	Wi-Fi: 7332558036419 No Wi-Fi: 7332558036433
UPC-12	Wi-Fi: 845188034344 No Wi-Fi: 845188034368
Part number	Wi-Fi: T912644 No Wi-Fi: T912646

This product is subject to United States export regulations and may require US authorization prior to export, reexport, or transfer to non-US persons or parties. Diversion contrary to US law is prohibited.

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