FLIR Si2-LD™

Industrial Acoustic Imaging Camera for Pressurized Leak Detection and Mechanical Fault Detection

Key Features

- Detects, locates, and measures compressed air and gas leaks; including bearing fault detection, from up to 200 m (656 ft) away
- Built-in measurement and cost analysis for industrial gases including ammonia, hydrogen, CO_2, methane, helium, and argon
- One-handed operation with automatic tuning, 8x zoom, and a 12 MP digital camera
- Mechanical fault mode, automatic selection, and optimization of filters simplifies finding critical mechanical issues, such as bearing faults
- Fleet management functionality for efficient tool usage and maintenance across large-scale operations

Main Applications

- Detecting and quantifying leaks in manufacturing, production, and assembly applications; in all applications using compressed air
- Early leak detection for enhancing safety and compliance while minimizing costly repairs
- Rapid, accurate leak detection, boosting efficiency and client satisfaction in compressed air and gas system maintenance
- Mechanical fault mode to detect faulty bearings to help plan repairs and avoid downtime

SPECIFICATIONS

FLIR Si2-LD	
Acoustic measurement	124 low-noise MEMS microphones, real-time sound visualization
Detection threshold	20 kHz: -15 dB SPL 35 kHz: 4 dB SPL 50 kHz: 10 dB SPL 80 kHz: 36 dB SPL 100 kHz: 51 dB SPL
Bandwidth	2 kHz to 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.
Other acoustic analysis modes	Mechanical fault detection
Imaging & Optical	
Digital camera	12 MP color
Camera field of view	75° diagonal
Video frame rate	Camera: 60 fps; Acoustic image: 30 fps; Screen: 70 fps
Zoom	8x Digital zoom
Video image resolution	1280 × 720

Speci ications subject to change.

User Interface	
Display	Size: 5 in. 1280 × 720 Resistive touch screen, TFT LCD, MIPI DSI
Integrated flashlight	LEDs, two modes: ON / OFF
Analysis and Reporting	
Online	FLIR Acoustic Camera Viewer (cloud service) https://acousticviewer.flir.com
Offline	FLIR Thermal Studio (desktop software)
Communication and Data Storage	
Data transfer	Wi-Fi 2.4 GHz and 5 GHz IEEE 802.11.b/g/n/ac wireless LAN, USB memory stick, Acoustic USB Adapter Cable
Camera software update	Automatic Over The Air (OTA) wireless update or via USB connection
Still image format	.nlz and .jpg
Video recording & format	Up to 5 minutes (.nlz format)
Storage, internal	128 GB (SD card)
Storage, external	USB 8 GB, Cloud storage capacity is unlimited
Image annotations	Image tags, comments, and GPS coordinates
Power Supply	
Camera power input	Nominal input voltage: 12 V DC Max input: 17 V DC , 3.3 A (limited)
Battery	Li-Ion rechargeable battery pack (RRC 2054):14.4 V DC, 3.45 Ah, 49.68 Wh Usage: Up to 2.5 h Charge time: approx. 2 h Max output: 16.8 V DC, 5 A

SPECIFICATIONS, CONT.

Battery charger	Input: 19–26 V DC, 2.8 A Max output: 17.4 V DC, 4.8 A
Environmental Data	
Operating temperature range	-10°C to 50°C (14°F to 122°F)
Storage temperature range	-20°C to 50°C max -20°C to 25°C recommended (determined by the battery)
Relative humidity	0–90% recommended
EMC	CFR47 FCC Part 15 Subpart B
Radio	CFR47 FCC Part 15 Subpart C/E, ETSI EN 301 489-1/-17, ETSI EN 300 328, ETSI EN 301 893
Ingress protection	IP54
Safety	IEC 62368-1
Declaration of conformity	See: https://support.flir.com/resources/DoC
Physical Data	
Camera size	184 x 276 x 167 mm (7.2. x 10.8 x 6.5 in)
Camera weight	~ 1.2 kg
Battery size	85 × 77 mm (RRC2504)
Battery weight	~ 0.25 kg
Total weight	~ 1.45 kg (camera + battery)

Warranty and Service	
Warranty	http://www.flir.com/warranty/
Shipping Information	
Packaging, type	Cardboard box
Packaging, contents	Camera Battery (2 ea) Battery charger Power cable (4 ea) Neck strap Hard transport case License card: FLIR Si-series Plugin for FLIR Thermal Studio, Perpetual license Printed documentation USB memory stick
Packaging, weight	6 kg (13 lb)
Packaging, size	365 x 190 x 490 mm (14.4 x 7.5 x 19.3 in)
EAN-13	7332558035719
UPC-12	845188033651
P/N	T912604

Speci ications subject to change.

For more information about FLIR Si2-LD™ please scan or visit: