

FLIR Si1-LD™

Industrial Acoustic Imaging Camera for Compressed Air Leak Detection

Key Features

- Automatically detects compressed air and vacuum leaks from up to 130 meters (427 feet) away.
- Noise suppression technology ensures uninterrupted use in noisy industrial environments, improving accuracy and usability.
- Band-pass filter enables manual tuning of the frequency range for precise inspections.
- Lightweight design enables intuitive, single-handed operation, ideal for fast-paced inspections across large facilities.
- Touch-screen interface captures high-resolution images with real-time quantifiable leak-rate and cost prediction for prioritizing repairs.
- Seamless reporting options, including online analysis via FLIR Acoustic Viewer and offline reporting with FLIR Thermal Studio software.

SPECIFICATIONS

Measurement & Analysis

Acoustic measurement	96 low-noise MEMS microphones, real-time sound visualization		
Detection threshold	20 kHz: -5 dB 35 kHz: 9 dB	50 kHz: 15 dB 80 kHz: 41 dB	100 kHz: 56 dB
Bandwidth	2 kHz to 100 kHz		
Directional resolution	From 1° up to 0.125°		
Operating distance	From 0.3 m (1.0 ft) up to 130 m (427 ft)		
Auto distance	Automatic distance up to 5 m (16.45 ft)		
Leak localization and detection	Automatic leak recognition including estimated leak size and annual cost		
Leak rate detection threshold	0.5 m: 0.004 l/min 2.5 m: 0.010 l/min	6.0 m: 0.017 l/min	
Autofilter, automatic frequency selection	No		
Band-pass filter	Yes		
Supported gases	Compressed air		
Mechanical mode	No		



Main Applications

- Leak detection in manufacturing and process industries
- Preventative maintenance and equipment optimization
- Energy efficiency and compliance

www.flir.com/Si1-LD

Imaging & Optical

Digital camera	12 MP color
Camera field of view	65° diagonal
Video frame rate	Camera: 60 fps / Acoustic image: 30 fps / Screen: 70 fps
Zoom	8x Digital zoom
Video image resolution	1280 × 720

User Interface

Display	Size: 5 in. 1280 × 720, Resistive touch screen, TFT LCD, MIPI DSI
Integrated flashlight	LEDs, two modes: ON / OFF

Analysis & Reporting

On-line	FLIR Acoustic Viewer (cloud service) https://acousticviewer.flir.com
Off-line	FLIR Thermal Studio (desktop software)

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

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SPECIFICATIONS, CONT.

Communication & Data Storage

Data transfer	• Wi-Fi 2.4 GHz and 5 GHz IEEE 802.11b/g/n/ac wireless LAN • USB memory stick
Camera software update	• Automatic over Wi-Fi • USB via computer
Still image format	.nltz and .jpg
Video recording & format	Up to 5 minutes (.nltz format)
Storage, internal	32 GB (SD card)
Storage, external	8 GB (USB), Cloud storage capacity is unlimited
Image annotations	Image tags and comments

Power

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
Battery charger	Input: 19 V to 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 (-4°F to 122°F) max -20°C to 25°C (-4°F to 77°F) recommended
Relative humidity	0% to 90% recommended
EMC	CFR47 FCC Part 15 Subpart B
Radio	R47 FCC Part 15 Subpart C/E, ETSI EN 301 489-1/-17, CFR47 FCC Part 15 Subpart C/E, ETSI EN 301
Ingress protection	IEC 62368-1
Declaration of conformity	See: https://support.flir.com/resources/DoC

Physical Data

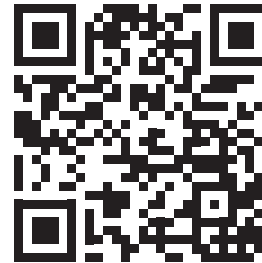
Camera size	184 mm x 276 mm x 167 mm (7 in x 11 in x 6 in)
Camera weight	~ 1.2 kg
Battery size	85 mm x 77 mm (RRC2504)
Battery weight	~ 0.25 kg
Total weight (camera + battery)	~ 1.45 kg

Warranty & 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	490 mm x 365 mm x 190 mm (19.3 in x 14.4 in x 7.5 in)
EAN-13	7332558035139
UPC-12	845188032838
P/N	Si-LD: T912537 Si-LD (No Wi-Fi): T912544



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