FLIR Si2-Pro™

Industrial Acoustic Imaging Camera for Partial Discharge Detection, Pressurized Leak Detection and Mechanical Fault Detection

Key Features

- Mechanical fault detection for early identification of bearing problems, preventing costly downtime
- Quantify leak rate and cost of industrial gas and compressed air leaks, to prioritize repair and calculate savings
- On-camera and in-software severity assessment and type classification of partial discharge (PD) issues
- Automatic frequency tuning, 8x zoom, 12 MP digital camera, IP54 rating, and a QR code reader
- Fleet management functionality for efficient tool usage and maintenance across large-scale operations

Main Applications

- Ideal for routine inspections and preventative maintenance in various industrial settings
- Ensures adherence to safety standards by identifying potential hazards in bearings and gas systems
- Aids in managing and reducing operational costs through early leak detection and analysis
- Mechanical fault mode to detect faulty bearings to help plan repairs and avoid downtime

www.flir.com/Si2-Pro

SPECIFICATIONS

Acoustic Measurement

Detection threshold	20 kHz: -7 dB SPL 35 kHz: 4 dB SPL 50 kHz: 10 dB SPL 80 kHz: 36 dB SPL 100 kHz: 51 dB SPL
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)
Severity assessment	Automatic AI-based severity assessment including recommended actions onboard camera
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
Supported gases	Compressed air, hydrogen, CO2, methane, natural gas, helium, argon, ammonia
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

User Interface

Display	Size: 5 in. 1280 × 720 Resistive touch screen, TFT LCD, MIPI DSI
Integrated flashlight	LEDs, three modes off, normal and bright

Analysis & Reporting

On-line	FLIR Acoustic Camera Viewer (cloud service) www.acousticviewer.flir.com
Off-line	FLIR Thermal Studio (desktop software)

So advanced, it's simple

UE SYSTEMS INC | ACOUSTIC CAMERAS POWERED BY FLIR

SPECIFICATIONS, CONT.

Communication & Data Storage

Data transfer	• Wi-Fi 2.4 GHz and 5 GHz IEEE 802.11.b/g/n/ac wireless LAN • USB memory stick
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 and comments

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 (depends on ambient conditions & usage, needs to be retested and confirmed with final product) Charge time: approx. 2 h Max output: 16.8 V DC, 5 A
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/-19, ETSI EN 300 328, ETSI EN 301 893
Protection class	IP54
Safety	IEC 62368-1
Declaration of conformity	See: https://support.flir.com/resources/DoC

Physical Data

Camera size	288 mm × 182 mm × 159 mm (11 in × 7 in × 6 in)
Camera weight	~ 1.2 kg
Battery weight	85 mm × 77 mm (RRC2504)
Battery size	~ 0.25 kg
Total weight (camera + battery)	~ 1.45 kg

Warranty & Service

Warranty	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 × 365 mm × 190 mm (19.3 in × 14.4 in × 7.5 in)
EAN-13	7332558033036
UPC-12	845188030179
P/N	T912340

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