

# FLIR Si2x-Pro™

## Hazardous Location Acoustic Imaging Camera for Partial Discharge, Leak, and Bearing Fault Detection



### Key Features:

- Detects, locates, and measures compressed gas leaks and mechanical issues in explosive atmospheres quickly and easily
- Offers mechanical issue condition assessment with three measurement metrics for early identification of bearing problems to prevent costly downtime
- Quantifies leak rate and cost of industrial gas and compressed air leaks, to prioritize repair and calculate savings
- Includes on-camera and in-software severity assessment and type classification of partial discharge (PD) issues
- Features automatic frequency tuning, 8x zoom, 12 MP digital camera, and a QR code reader
- Offers fleet management functionality for efficient tool usage and maintenance across large-scale operations

### Main Applications:

- Early leak detection for enhancing safety and for “pre-turnaround” tightness inspections, with minimal training
- Quickly inspect Zone 2 rated hazardous locations for partial discharge issues, mechanical faults or potential leaks
- Detect faulty bearings quickly to help plan repairs and avoid downtime

[www.flir.com/Si2x-Pro](http://www.flir.com/Si2x-Pro)

### SPECIFICATIONS

| FLIR Si2x-Pro                   |  |
|---------------------------------|--|
| Acoustic measurement            | 124 low-noise MEMS microphones, real-time sound visualization  |
| 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)   |
| PD Severity assessment          | Automatic AI-based severity assessment including recommended actions on-board 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, carbon dioxide, methane, natural gas, helium, argon, ammonia, nitrogen                     |
| Other acoustic analysis modes   | Mechanical fault detection, condition assessment, and fault measurement  |
| Analysis and Reporting          |  |
| On-line                         | FLIR Acoustic Camera Viewer (cloud service)*<br><a href="http://acousticviewer.flir.com">acousticviewer.flir.com</a> |
| Off-line                        | FLIR Thermal Studio (desktop software)*  |

\*See reverse for comparison

| 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<br>Resistive touch screen, TFT LCD, MIPI DSI           |
| Integrated flashlight          | LEDs, two modes: ON / OFF   |
| Communication and Data Storage |   |
| Data transfer                  | Wi-Fi 2.4 GHz and 5 GHz IEEE 802.11.b/g/n/ac wireless LAN<br>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 and format     | Up to 5 minutes (.nlz format)   |
| Storage, internal              | 128 GB (SD card)  |

For more information and to find your local support number, visit:  
**[FLIR.com/contact/instruments-support](http://FLIR.com/contact/instruments-support)**

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Hazardous Location Acoustic Imaging Camera  
for Partial Discharge, Leak, and Bearing Fault Detection

## SPECIFICATIONS, CONT.

|   |  |
|---|--|
| Storage, external   | USB 8 GB, Cloud storage capacity is unlimited                                      |
| Image annotations   | Image tags, comments, QR Code data   |
| Battery   | Li-Ion rechargeable battery pack<br>Usage: Up to 2.5 h<br>Charge time: approx. 2 h |
| Battery charger   | Input: 19-26 V DC, 2.8 A<br>Max output: 17.4 V DC, 4.8 A                           |
| <b>Environmental Data</b>   |  |
| Operating temperature range   | -10°C to 50°C (14°F to 122°F)  |
| Ingress protection  | IP54   |
| <b>Physical Data</b>  |  |
| Camera size   | 184 × 276 × 167 mm (7.2 × 10.8 × 6.5 in)   |
| Camera weight   | ~1.2 kg  |
| Battery weight  | ~0.25 kg   |
| Total weight (camera + battery)   | ~1.45 kg   |
| <b>Warranty and Service</b>   |  |
| Warranty  | support.flir.com/Si2   |
| <b>Shipping Information</b>   |  |
| Packaging, weight   | 6 kg (13 lb)   |
| Packaging, size   | 490 mm × 365 mm × 190 mm (19.3 in × 14.4 in × 7.5 in)                              |
| <b>Hazardous Location Ratings</b>   |  |
| 3rd Party Certification for Zone 2 Gas & Dust. Certifications available at support.flir.com/Si2 |  |

For the most up-to-date product specifications visit support.flir.com/si2. Specifications subject to change without notice.

## ANALYSIS SOFTWARE COMPARISON

| Feature                            | FLIR Acoustic Viewer  | FLIR Thermal Studio Plug-in   |
|------------------------------------|---|---|
| Highlight                          | Enables enterprise customer scaling   | Enables custom reporting for thermal and acoustic imaging   |
| Workspace                          | On-line   | Off-line  |
| Snapshot editing and annotation    | Yes   | Yes   |
| Video playback                     | Yes   | Yes   |
| IR imaging support                 | No  | Yes   |
| Organizational module              | Yes   | No  |
| API for integration                | Yes   | No  |
| Export (.xls) summary of snapshots | Yes   | No  |
| Storage location                   | FLIR Acoustic Cloud   | Local   |
| Cost                               | Free  | Free and paid options   |
| Optimal user                       | <ul style="list-style-type: none"><li>Owns multiple cameras</li><li>Requires tool fleet management, data sharing and organization</li><li>Requires unlimited data storage</li></ul> | <ul style="list-style-type: none"><li>Requires thermal and acoustic images in the same reporting software</li><li>Requires highly customized reports</li><li>Requires off-line analysis and reporting</li></ul> |



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**GoThermal (Pty) Ltd | TeleEye (SA) (Pty) Ltd**

**Unit 9, 4 Homestead Avenue,  
Bryanston, 2191  
South Africa**

**Sales@GoThermal.co.za  
+27 11 557 9200**

For more information and to find your local support number, visit:  
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