

## Key Features:

- 24/7 monitoring of both partial discharge and pressurized gas leaks for early fault detection, improved safety, and reduced downtime.
- Accurately detects, locates, and assesses PD activity while also identifying and quantifying compressed air and gas leaks and associated cost impact.
- Rugged IP66 design with flexible mounting for reliable operation in harsh industrial and utility environments.
- Real-time AI-driven analysis with minimal manual input, seamless enterprise integration, and Flir Assetlink compatibility for centralized monitoring and asset management.

## Main Applications:

- Continuous monitoring of transmission, distribution, and substation assets to detect insulation faults and prevent outages.
- Detection of compressed air and industrial gas leaks across pipelines, valves, and connections to reduce energy loss and emissions.
- Condition monitoring of switchgear and gas-insulated equipment to identify both electrical and gas-related issues early.
- Plant-wide reliability improvement by combining electrical and leak detection in a single monitoring solution.



## Specifications

| Acoustic Specifications         |                                                                                                                                                                                                     |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Acoustic measurements           | 124 low-noise MEMS microphones, real-time sound visualization                                                                                                                                       |
| Detection threshold             | 20 kHz: -19.5 dB<br>35 kHz: -11.2 dB<br>50 kHz: -9.8 dB<br>80 kHz: 12.2 dB<br>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. |
| PD type recognition             | Surface or Internal Discharge, Positive and Negative Corona, Negative Corona, Floating Discharge                                                                                                    |
| PRPD pattern recognition        | Automatic                                                                                                                                                                                           |
| Severity assessment             | Automatic AI-based severity assessment including recommended actions                                                                                                                                |

| Imaging and Optical                   |                                                                                              |
|---------------------------------------|----------------------------------------------------------------------------------------------|
| Digital camera                        | 12 MP Color                                                                                  |
| Camera field of view                  | 75° diagonal                                                                                 |
| Video frame rate                      | Streaming: 15 fps<br>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<br>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 |

Specifications subject to change. For the most up-to-date specifications, please visit [flir.com](https://flir.com).

For technical or sales support, please visit:

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## Specifications, continued

| 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)                                                                                                                                                            |
| 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)<br>EN 55032, EN 55035, EN 301 489-1/-17, EN 300 328, EN 301 893 |
| Ingress protection          | IP66                                                                                                                                                                          |

| Shipping Information |                                                                                                                                                                                                                                                                |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Packaging, type      | Cardboard box                                                                                                                                                                                                                                                  |
| Packaging, contents  | Camera<br>Wi-Fi Antenna (Included with models that support Wi-Fi)<br>Printed documentation including the username and password for log in to the web interface of the camera<br>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               | Si2a-Pro: 7332558037522<br>Si2a-Pro No Wi-Fi: 7332558037539                                                                                                                                                                                                    |
| UPC-12               | Si2a-Pro: 845188035556<br>Si2a-Pro No Wi-Fi: 845188035563                                                                                                                                                                                                      |
| Part number          | Si2a-Pro: T912770<br>Si2a-Pro No Wi-Fi: T912798                                                                                                                                                                                                                |

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