

TECHNICAL DATA

# Fluke ii915, ii905, and ii500 Acoustic Imagers



**SOUNDSIGHT™ TECHNOLOGY**

**ACOUSTIC IMAGING**

Blended live SoundMap™ with visual image

**DISPLAY**

7-inch 1280 x 800 LCD with capacitive touchscreen

**LEAKQ™ MODE**

Leak quantification: on-device estimated leak size and cost indications

**MECQ™ MODE**

Mechanical inspection: on-device feature to detect and document mechanical issues, available on ii915

**PDQ MODE™**

Partial discharge: on-device PD classification, available on ii915

SoundSight™ refers to the Fluke technology of converting sound waves to a visual image.

**The all-in-one tool you have been looking for to visualize leaks, partial discharge, and mechanical issues.**

**Leaks: Hidden Costs Due to Leaks in Compressed Air, Gas, Steam, and Vacuum Systems.**

While most manufacturers know these leaks exist, addressing them has been time-consuming and tedious. With the Fluke ii-series and minimal training, your maintenance technicians can begin checking for leaks during their typical maintenance routine—even during peak operation hours. The ii-series acoustic imagers let technicians see sound as they scan hoses, fittings, and connections for leaks. Its built-in acoustic array of tiny sensitive microphones generates a spectrum of decibel levels per frequency. Based on this output, an algorithm calculates a sound image, known as SoundMap™ that is superimposed on a visual image. The SoundMap is automatically adapted depending on the frequency level selected so that background noise is filtered out, making it incredibly simple to detect compressed gas leaks.



### Mechanical: First-Line Inspection to Locate Potential Mechanical Issues Early and Avoid Unplanned Downtime

Conveyor systems, with their vast size and intricate components, often pose a maintenance challenge, threatening to disrupt production and cause unplanned downtime. The Fluke ii915 with MecQ™, a game-changer in the field, enables efficient scanning of large areas, detecting and documenting potential issues for more targeted maintenance. With its contactless scanning and advanced noise filtering, the Fluke ii915 Acoustic Imager with MecQ™ Mode ensures safety and delivers clear images even in high-noise environments. By detecting areas of concern early on, it instills confidence in its users, enabling proactive measures to prevent costly problems, surpassing traditional methods. For professionals seeking to ensure seamless operation of large conveyance systems, the Fluke ii915 Acoustic Imager with MecQ™ is the ultimate choice.

### Partial Discharge: The Invisible Threat... Now You Can See

Partial discharge, a serious issue that can lead to arc flash fires, blackouts, explosions, and danger to life, is now a visible threat. Whether you are inspecting insulators, transformers, switch gears, or high-voltage powerlines, the Fluke ii915 Acoustic Imager with PDQ Mode™ is your proactive tool. This tool, designed for high-voltage electricians, electrical test engineers, and grid maintenance teams, translates the sound of partial discharge into visuals that pinpoint the location. With an extended frequency range of 2-100 KHz, the ii915 enables early detection of potential problems, empowering you to plan maintenance and prevent catastrophic events.



|                         | ii500                       | ii905  | ii915  |
|-------------------------|-----------------------------|--|--|
| <b>LeakQ™</b>           | Scale (1-10)                | Leak size scale, leak rate, and leak cost estimation | Leak size scale, leak rate, and leak cost estimation |
| <b>PDQ™</b>             |                             |  | •  |
| <b>MecQ™</b>            |                             |  | •  |
| <b>Wifi</b>             |                             | •  | •  |
| <b>Frequency</b>        | 2 to 52 kHz                 | 2 to 65 kHz  | 2 to 100 kHz   |
| <b>Detection Range</b>  | Up to 50 meters (164 feet)* | Up to 70 meters (230 feet)*                          | Up to 120 meters (393 feet)*                         |
| <b>Resolution</b>       | 0.3 MP                      | 5.0 MP   | 5.0 MP   |
| <b>Battery Life</b>     | 6 hours                     | 6 hours  | 6 hours  |
| <b>Memory</b>           | 20 GB                       | 32 GB  | 32 GB  |
| <b>Tripod Connector</b> |                             | •  | •  |

\*Depending on ambient conditions



**Large 7" touch screen**  
High resolution 7" capacitive, full color touch screen, supports interaction with interface menu.

**Operating time**  
Stay powered all day with six hours of operating time

**One button capture image**  
Capture images on-the-go with one click, no need to navigate the menu for image capture

**Intuitive user interface**  
Easy to use with minimal training.

- Features supporting common workflows
- Unique customizable frequency band filter
- On-device real time data
- Customizable profiles for different inspection types

**Ergonomic to use**  
Adjustable hand strap and adjustable neck strap

**Tripod connector**  
ii915 and ii905 models come with standard 1/4"-20 UNC threaded hole for easy tripod mounting and clear images or video

**Annotate and tag**  
Tag your inspections by adding photo notes, asset identifiers, text notes, and follow-up actions, including priority. Use QR codes to easily identify your inspections. No hassle or errors with seamless integration using the FlukeConnect™ desktop software.

## Reduce the frustration of unplanned downtime in four easy steps

### 1. Locate

Quickly and easily scan areas and pinpoint where unusual sounds are coming from – even those sounds out of range for human hearing.

### 2. Document

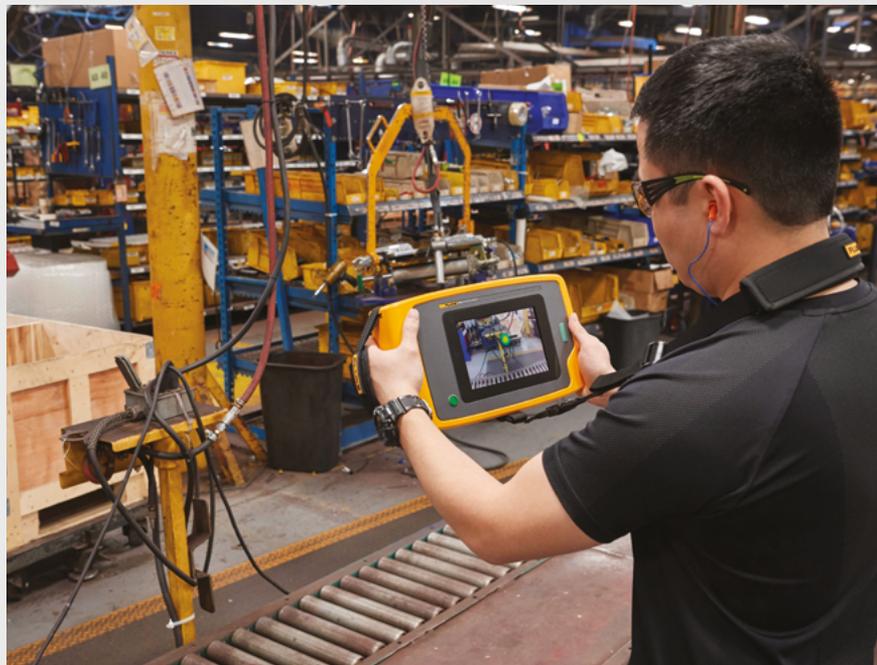
Take a screenshot of the point of interest. Then annotate and tag the photo to define follow-up action and urgency.

### 3. Share

Share the annotated screenshots with your team so they can respond and schedule maintenance.

### 4. Repair

Investigate the pinpointed areas further during planned downtime to determine what the problem is and proactively fix it.



## Specifications

| Key Features                                   | ii500   | ii905  | ii915  |
|--|---|--|--|
| <b>Sensors</b>                                 |   |  |  |
| Frequency band                                 | 2 kHz to 52 kHz   | 2 kHz to 65 kHz                                      | 2 kHz to 100 kHz<br>2 kHz to 52 kHz          |
| Detection range <sup>1</sup>                   | 0.5 to > 50 meters<br>(1.6 to > 164 feet)                 | 0.5 to > 70 meters<br>(1.6 to > 230 feet)            | 0.5 to > 120 meters<br>(1.6 to > 393 feet)   |
| Field of view (FOV)                            | 63°± 5°   |  |  |
| Nominal frame rate                             | 25 FPS  |  |  |
| <b>Built-in digital camera (visible light)</b> |   |  |  |
| Field of view (FOV)                            | 63°± 5°   |  |  |
| Focus  | Fixed lens  |  |  |
| Zoom   | No zoom   | 3 x digital zoom                                     |  |
| Resolution                                     | 0.3 MP  | 5 MP   |  |
| <b>Display</b>                                 |   |  |  |
| Size   | 7" LCD with backlight, sunlight readable                  |  |  |
| Resolution                                     | 1280 x 800 (1,024,000 pixels)                             |  |  |
| Touchscreen                                    | Capacitive  |  |  |
| Acoustic image                                 | SoundMap™ image   |  |  |
| <b>Image storage</b>                           |   |  |  |
| Storage capacity                               | 20 GB<br>(> 5,000 pictures / > 999 videos)                | 32 GB<br>(> 8,000 pictures / > 1,600 videos)         |  |
| Image format                                   | Blended visual and SoundMap™ .JPG or .PNG                 |  |  |
| Video format                                   | Blended visual and SoundMap™ .MP4                         |  |  |
| Video length                                   | Up to 5 minutes   |  |  |
| Digital export                                 | USB-C for data transfer                                   |  |  |
| <b>Acoustic measurements</b>                   |   |  |  |
| Measurement range (typical)                    | 15.4 to 115.2 dB SPL<br>(± 1 dB SPL 2 kHz)                | 15.4 to 115.2 dB SPL<br>(± 1 dB SPL 2 kHz)           | 12.1 to 114.6 dB SPL<br>(± 1 dB SPL 2 kHz)   |
|  | 5.6 to 102.5 dB SPL<br>(± 2 dB SPL 19 kHz)                | 5.6 to 102.5 dB SPL<br>(± 2 dB SPL 19 kHz)           | 4.4 to 101.2 dB SPL<br>(± 2 dB SPL 19 kHz)   |
|  | 28.4 to 131.1 dB SPL<br>(± 1 dB SPL 35 kHz)               | 28.4 to 131.1 dB SPL<br>(± 1 dB SPL 35 kHz)          | 12.8 to 119.2 dB SPL<br>(± 1 dB SPL 35 kHz)  |
|  | 41.8 to 133.1 dB SPL<br>(± 3 dB SPL 52 kHz)               | 41.8 to 133.1 dB SPL<br>(± 3 dB SPL 52 kHz)          | 19.8 to 116.1 dB SPL<br>(± 3 dB SPL 52 kHz)  |
|  |   |  | 41.4 to 129.0 dB SPL<br>(± 1 dB SPL 80 kHz)  |
|  |   |  | 54.4 to 135.5 dB SPL<br>(± 1 dB SPL 100 kHz) |
| <b>Classification and quantification</b>       |   |  |  |
| LeakQ™   | Leak size scale (1-10)                                    | Leak size scale, Leak rate, and Leak cost estimation |  |
| PDQ Mode™                                      | -   | -  | Partial discharge type classification        |
| MecQ™  | -   | -  | Mechanical anomaly detection                 |
| Auto max/min dB gain                           | Auto  | Auto or manual, user selectable                      |  |
| Frequency band selection                       | User selectable through user-made presets or manual entry |  |  |
| <b>Battery</b>                                 |   |  |  |
| Battery  | Rechargeable and field replaceable Li-ion battery         |  |  |
| Battery life                                   | 6 hours   |  |  |
| Battery charging time                          | ~3,5 hours  |  |  |
| Battery charging system                        | External (Bay charger)                                    | Internal (USB-C)                                     |  |

<sup>1</sup> Depending on ambient conditions

| Key Features                                      | ii500   | ii905   | ii915                       |
|---|---|---|-----------------------------|
| <b>Software</b>                                   |   |   |                             |
| Ease of use                                       | Intuitive user interface  |   |                             |
| Acoustics: Show dB scale                          | On/Off  |   |                             |
| Acoustics: Min/Max dB                             | Manual/Auto   |   |                             |
| Acoustics: Profiles                               | -   | Preset capture profiles                                   |                             |
| Acoustics: High frequency                         | -   |   | Yes                         |
| Acoustics: Multiple sources                       | Single source   | Show single or multiple sources                           |                             |
| Palette: Colors                                   | 3: Grayscale, Ironbow, and Blue-Red   |   |                             |
| Palette: Overly transparency                      | Yes: 1-100 %  |   |                             |
| Grayscale mode                                    | Yes   |   |                             |
| Centerpoint markers                               | On/Off  |   |                             |
| Trend graphs                                      | Frequency and dB scale  |   |                             |
| Spotmarkers                                       | dB level reading at center point of image   |   |                             |
| Leak values                                       | LeakQ™ scale (1-10) <sup>2</sup>  | Leak costs, Leak volume, LeakQ™ scale (1-10) <sup>2</sup> |                             |
| Master admin menu                                 | -   | Yes   |                             |
| Annotation  | Asset name; Asset ID; Asset type; Leak type; Gas type; Pressure   |   |                             |
| Photo notes                                       | Up to 4 photos notes for reference  |   |                             |
| Asset inspection status                           | -   | 'As left', 'As found', 'Undetermined'                     |                             |
| Asset ID  | Text input and automatic QR code based asset ID identification  |   |                             |
| Actions annotation                                | -   | Action requirements, Action priority level, Action notes  |                             |
| Other   | -   | Operating conditions, Weather notes                       |                             |
| <b>General specifications</b>                     |   |   |                             |
| Tripod holder / connector                         | -   | Yes: 1/4"-20  |                             |
| USB   | 1 x USB-C   | 2 x USB-C   |                             |
| Wireless  | -   | Wifi  |                             |
| Operating Temperature                             | -10 to 45 °C (14 to 113 °F)   | -10 to 40 °C (14 to 104 °F)                               | -10 to 45 °C (14 to 113 °F) |
| Storage Temperature                               | -20 to 70 °C (-4 to 158 °F) without batteries installed   |   |                             |
| Relative humidity                                 | 10 to 95 % non-condensing   |   |                             |
| Size (H x W x L)                                  | 186 mm x 322 mm x 68 mm (7.3 inches x 12.7 inches x 2.7 inches)   |   |                             |
| Weight (battery included)                         | 2.1 kg (4.6 pounds)   | 2.0 kg (4.4 pounds)                                       |                             |
| Ingress Protection (IP)                           | IP40  |   |                             |
| Warranty  | 2 year  |   |                             |
| Fluke Premium Care                                | Premium Care Standard <sup>3</sup>  |   |                             |
| Self-diagnostic notification                      | Array-health test to identify when microphone array needs attention   |   |                             |
| Supported languages                               | Dutch, English, Finnish, French, German, Italian, Japanese, Korean, Polish, Portuguese, Simplified Chinese, Spanish, Swedish, Traditional Chinese |   |                             |
| RoHS compliant                                    | Yes   |   |                             |
| <b>Safety</b>                                     |   |   |                             |
| General safety                                    | IEC 61010-1   |   |                             |
| Electromagnetic Compatibility (EMC) International | IEC 61326-1: Portable Electromagnetic Environment IEC 61326-2-2 CISPR 11: Group 1, Class A  |   |                             |
| Korea (KCC)                                       | Class A Equipment (Industrial Broadcasting and Communication)   |   |                             |
| USA (FCC)   | 47 CFR 15 sub part B. This product is considered an exempt device per clause 15.103   |   |                             |

<sup>2</sup> 1-10 Scale (independent of Leak Type)

<sup>3</sup> Subject to regional availability ([www.fluke.com/premiumcare](http://www.fluke.com/premiumcare))



## Ordering information

FLK-ii500 Acoustic Imager

FLK-ii905 Acoustic Imager

FLK-ii915 Acoustic Imager

### Included

Acoustic Imager; Power supply\*; Lithium-ion smart battery pack; USB-C cable; Rugged hard carrying case; Array sensor cover; Adjustable hand strap, and adjustable neck strap.

\* ii500 includes a battery charging bay.

Visit **fluke.com** to get complete details on these products or ask your local Fluke sales representative.

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