ii900/ii910
Acoustic Imager

Product Specifications
Specifications

Acoustic Sensing and Imaging

Number of Microphones: 64 digital MEMS

Frequency Range:
- ii900: 2 kHz to 52 kHz
- ii910: 2 kHz to 100 kHz

Operation Distance:
- ii900: 0.5 m to 70 m
- ii910: 0.5 m to 120 m

Field-of-View (FOV): 63° ±5°

Nominal Frame Rate: 25 FPS

Visual Camera

Resolution on Screen: 640 x 480
Field of View (FOV): 63° ±5°
Focus: Fixed lens
Image Mode: Color and Grayscale

Display

Display: 7" LCD with backlight, under-sunlight readable
Resolution: 1280 x 800
Touchscreen: Capacitive

Acoustic Image: Yes, SoundMap™ image overlaps with visual image

Image Storage

Memory/Storage Capacity: 20 GB
Image Format: Blended Visual and SoundMap™ image
- JPEG or PNG (JPEG by default)
Video Format: Blended Visual and SoundMap™ image .MP4
Save Video: up to 5 minutes

Acoustic Measurement and Analysis

Sound Pressure Range (typical):
- ii900: 15.4 dB SPL to 115.2 dB SPL ±1 dB SPL 2 kHz
  - 5.6 dB SPL to 102.5 dB SPL ±2 dB SPL 19 kHz
  - 28.4 dB SPL to 131.1 dB SPL ±1 dB SPL 35 kHz
  - 41.8 dB SPL to 133.1 dB SPL ±3 dB SPL 52 kHz
- ii910: 12.1 dB SPL to 114.6 dB SPL ±1 dB SPL 2 kHz
  - 4.4 dB SPL to 101.2 dB SPL ±2 dB SPL 19 kHz
  - 12.8 dB SPL to 119.2 dB SPL ±1 dB SPL 35 kHz
  - 19.8 dB SPL to 116.1 dB SPL ±3 dB SPL 52 kHz
  - 41.4 dB SPL to 129.0 dB SPL ±1 dB SPL 80 kHz
  - 54.4 dB SPL to 135.5 dB SPL ±1 dB SPL 100 kHz

Minimal Acoustic Imaging Sensitivity @ 1 m:
- ii900: 9 dB SPL 2 kHz
  - 3 dB SPL 19 kHz
  - 23 dB SPL 35 kHz
  - 37 dB SPL 52 kHz
- ii910: 3 dB SPL 2 kHz
  - 2 db SPL 19 kHz
  - 6 dB SPL 35 kHz
  - 17 dB SPL 52 kHz
  - 36 dB SPL 80 kHz
  - 51 dB SPL 100 kHz

Auto Max/Min dB Gain: Auto or manual. User selectable.

Frequency-Band Selection: User selectable
Capture Analysis Modes

LeakQ™ Mode ................................ Capture and analyze leak data to determine type of leak (quick-disconnect, threaded coupling, hose, open end) and estimate the size of the leak.

PDQ Mode™ (ii910 only) ...................... Capture and store partial discharge data to estimate the type of partial discharge (corona, surface/tracking, arcing, and void). The data includes information for later use to create pulse phase diagrams.

User Profiles ................................ User configurable profiles to save custom settings

Source-Visualization Mode .................... User-selectable between single-source or multiple-source detection

SoundMap™ Image Palettes ................. Blue-Red, Grayscale, Ironbow

Communication Interface and Buttons

USB ........................................ USB-C used to transfer data to PC, download files using standard USB Mass Storage device driver.

Buttons ....................................... Power on/off, image/video capture

Self-Diagnostic

Type ........................................ Array-health

Self-diagnostic warning to identify when too many microphones are faulty.

Mechanical

Size without Handstrap (H x W x L) ............ 186 mm x 322 mm x 68 mm
Weight ........................................ 2.15 kg

Ingress Protection ................................ IP40

Power Supply

Battery Type .................................. Rechargeable Li-ion, BP291
Certifications ................................... CB report to IEC62133, and UN38.3 Certification
Battery Life ..................................... >6 hours (Product includes spare battery)
Charging Method ............................... External dual-bay charger, EDBC 290
Charging Hours ................................ 3 hours
Charge Operating Temperature .............. 0 °C to 45 °C

Environmental

Temperature

Operating

i900 ......................................... -10 °C to 45 °C

i910 ......................................... -10 °C to 40 °C

Storage without battery ..................... -20 °C to 70 °C

Storage with battery ......................... -20 °C to 60 °C

Battery charging ............................. 0 °C to 45 °C

Altitude

Operating ..................................... 2000 m

Storage ....................................... 12 000 m

Humidity ................................... 10 % to 95 % non-condensing
Safety
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

Group 1: Equipment has intentionally generated and/or uses conductively-coupled radio frequency energy that is necessary for the internal function of the equipment itself.

Class A: Equipment is suitable for use in all establishments other than domestic and those directly connected to a low voltage power supply network that supplies buildings used for domestic purposes. There may be potential difficulties in ensuring electromagnetic compatibility in other environments due to conducted and radiated disturbances.

Caution: This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

Emissions that exceed the levels required by CISPR 11 can occur when the equipment is connected to a test object.

Korea (KCC) ......................................................... Class A Equipment (Industrial Broadcasting & Communication Equipment)

Class A: Equipment meets requirements for industrial electromagnetic wave equipment and the seller or user should take notice of it. This equipment is intended for use in business environments and not to be used in homes.

USA (FCC) .......................................................... 47 CFR 15 subpart B. This product is considered an exempt device per clause 15.103.