

MPAC208

Megger Professional Acoustic Imager



- 208 MEMS Microphone array
- 100 kHz bandwidth
- Detection range up to 200 m
- 13 MP optical camera resolution
- 8" Touchscreen
- 10 Hour battery life (2 x 5 hr battery packs)
- Gas Leak, PD and Mechanical modes
- Optional thermal imaging modules

DESCRIPTION

The Megger MPAC208 Professional Acoustic Imaging Camera is a state-of-the-art diagnostic tool designed to detect and analyse ultrasonic sound patterns, enabling quick, reliable identification of gas leaks, mechanical faults, and electrical partial discharges in a variety of industrial environments. With advanced sound localisation and processing capabilities, this device streamlines maintenance workflows and enhances safety.

FEATURES

Precise Leak Detection

Effortlessly pinpoints pressurised and vacuum gas leaks, minimizing downtime and reducing energy losses.

Advanced Electrical Inspection

Includes Phase Resolved Partial Discharge (PRPD) analysis for clear identification and discrimination between different types of partial discharge in electrical systems.

Mechanical Fault Identification

Detects mechanical deterioration in rotating equipment, valves, and bearings through ultrasound monitoring, enhancing predictive maintenance.

Quantifiable Leak Rate Assessment

Built-in analytics quantify leak rates, helping estimate energy loss and prioritise repairs based on cost impact.

Noise Suppression with Focus Function

Focus feature minimizes unwanted background interference, providing clear, actionable acoustic images, even in noisy industrial environments.

Ultrasound to Audible Sound Conversion

Converts inaudible ultrasonic emissions to audible sound for intuitive identification and pinpointing of leak sources.

SoundScan™ Directional Guidance

Proprietary SoundScan™ technology directs the user to the primary sound source, even when it is outside the camera's visual field.

Field-Upgradable Firmware

Stay current with easy firmware updates via USB-C or microSD, ensuring long-term device performance and compatibility.

Acoustic Analysis Software

Included desktop software enables comprehensive analysis, reporting, and data management post-inspection.

Time-Domain Graph Display

Visualize and analyse ultrasonic signals in real-time with the time-domain graph, helping operators identify signal patterns, duration, and transient events for enhanced diagnostic accuracy.

Acoustic Spectrogram Visualisation

The built-in acoustic spectrogram displays frequency content over time, allowing users to easily distinguish between different sound sources and track changes in frequency behaviour, especially in complex environments.

Optional Thermal Imaging Modules

Add-on thermal imaging modules enables a side-by-side view of thermal and acoustic images, allowing for simultaneous detection of temperature anomalies and acoustic events, improving fault correlation and identification.

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VERIFICATION

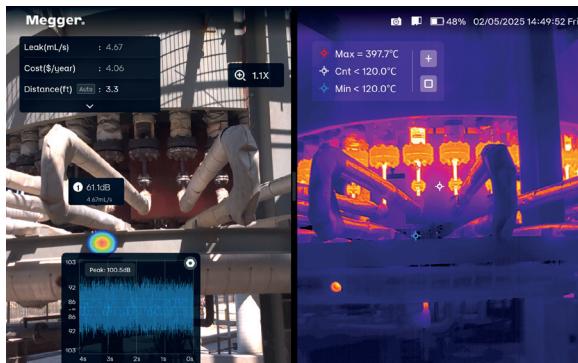
To ensure the MPAC cameras are operating within specified parameters, the Megger MPAC-V acoustic camera verifier can be used. This optional tool gives the operator the ability to verify the frequency and SPL measurements of the camera using a dedicated verification procedure. In addition, the camera can automatically check the operation of each MEMS microphone, to ensure optimum performance.

APPLICATIONS

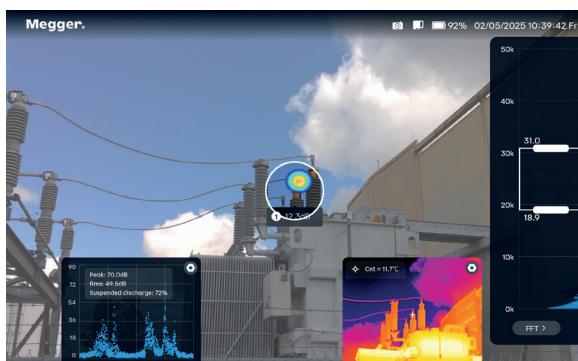
- Leak detection in compressed air and gas systems
- Predictive maintenance of mechanical systems
- High-voltage equipment inspections
- Industrial reliability and energy efficiency auditing

ACOUSTIC SPECIFICATIONS

- 208 channel MEMS microphone array
- Frequency range: 2 kHz to 100 kHz
- Detection range: 0.5 to 200 m (1 – 656 ft)
- Min leak detection rate:
0.0019 l/min @ 2.5 m 5 Bar
0.0022 l/min @ 6.0 m 5 Bar
- Leak cost quantification
- SPL Range 25.7 dBA to 132.5 dBA
- Dynamic Range 28 dB to 132 dB (adjustable)



These images shows the thermal capability with the optional thermal imaging module, MPAC-TM.



SPECIFICATIONS

Camera

- Resolution** 13 MP
- Camera Focal Length** 4.3 mm (0.17")
- Nominal Frame Rate** 25 fps
- Field of View (FOV)** Horizontal: 66° x Vertical: 52°
- LED Light** 4 Ultra-bright LEDs

Display

- Resolution** 1920 x 1200
- Size** 8 inches
- Brightness** 700 nits
- Touchscreen** Capacitive touch screen
- Zoom** 6x digital zoom
- Standard palettes** Grayscale, Ironbow, Rainbow

Communication and Storage

- Internal Storage** 64 GB
- External Storage** 64 GB external microSD card
- Image Format** JPG
- Audio Format** WAV
- Video Format** mp4
- Video Length** Up to 10 min
- Digital Export** microSD (TF) card/Wi-Fi/
USB-C flash drive
- Data Transfer** Wi-Fi, USB-C Flash drive, Bluetooth®
USB-C Cable, microSD (TF) card

Battery

- Battery Type** Li-Ion smart battery with charge indicator
- Battery Capacity** 6600 mAH, 7.2 V Rechargeable Li-ion
- Battery Life** 5 hours under full load state
- Charge Time** USB Type-C port – 2.15 Hrs
Charging cradle – 1.15 Hrs

Hardware Ports

- USB-C 1** USB 3.0 for charging, HDMI,
data export
- USB-C 2** USB 2.0, USB sensor, Thermal Module
- 3.5 mm audio jack** Headset output
- TF/microSD card slot** 64 GB card supplied
- Analog input** 4 Channel external analog sensor

Environmental

- Operating Temperature** -20 °C to +50 °C
- Relative Humidity** 10% to 95% (no condensation)
- Storage Temperature** -20 °C to +70 °C
- Charging Temperature** 10 °C to +45 °C
- Restriction of Hazardous Substances (RoHS) Compliant** Yes

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General Specification

Size	270 x 190 x 51 mm (10.6" x 7.5" x 2")
Weight	1.4 kg (3 lbs)
Bluetooth	BT 5.2
Environmental rating	IP54
Warranty	2 years
Supported Languages	English, Dutch, French, Simplified Chinese, German, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, Thai, Arabic, Macedonian, Romanian, Bulgarian

Safety

General Safety	IEC 61010-1
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Electromagnetic Compatibility (EMC)

International	IEC 61326-1: Portable Electromagnetic Environment IEC 61326-2-2 CISPR 11: Group 1, Class A
Vibration	2g, IEC 60068-2-6
Shock	25g, IEC 60068-2-27
Drop test	1.2 m

Software

Report types
Analysis

Gas/Electricity, ISO 50001-compliant
Waveform, spectrum, spectrogram, leakage assessment, PRPD type, PRPD spectrum. Thermal image analysis (with optional thermal module MPAC-TM).

ORDERING INFORMATION		
Description	Part number	Description
MPAC208 acoustic imaging camera	1016-917	Optional Accessories
Included Accessories		Thermal imaging module (364 x 288 resolution)
Hand straps		1016-920
Shoulder strap		Thermal imaging module (640 x 512 resolution)
Universal mains power charger		1016-921
USB-C charging cable		MPAC-V acoustic camera verifier
Headphones		1016-919
Carry case		Spare smart battery packs
64 GB microSD card		1016-924
USB-A microSD card reader		MPAC208 Pro Kit with MPAC208 Acoustic Camera, MPAC-V Verifier/Ultrasound Generator and Thermal Camera Module (640 x 512 resolution)
8 GB USB-C/USB-A memory stick		1016-922
Cleaning tool		
Smart battery pack (x2)		
Smart battery charger		
Acoustic & Thermal Analysis Software		

MPAC208_DS_EN_V02

ISO 9001
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