Megger.

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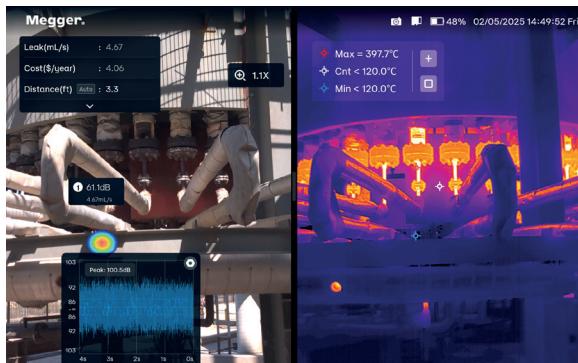
These images shows the thermal capability with the optional thermal imaging module, MPAC-TM.
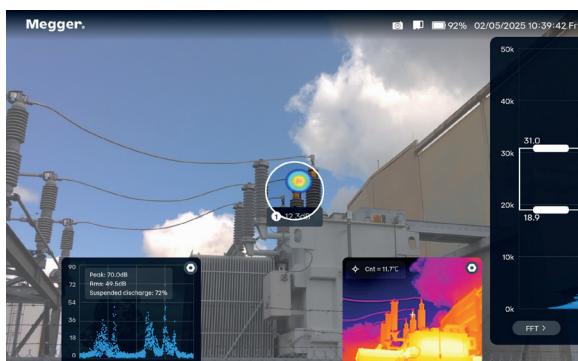
SPECIFICATIONS

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

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

ORDERING INFORMATION

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

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