

## 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

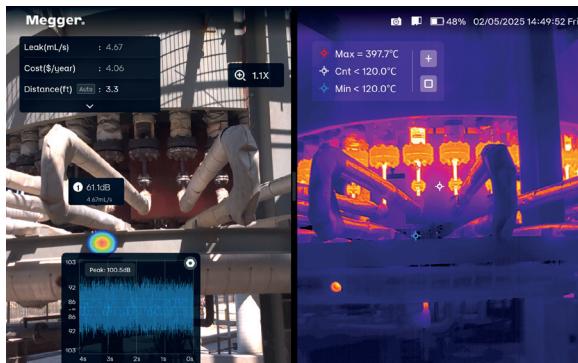
To ensure the MPAC cameras are operating within specified parameters, the Megger MPAC-V acoustic camera verifier can be used. This optional tool gives the operator the ability to verify the frequency and SPL measurements of the camera using a dedicated verification procedure. In addition, the camera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

### APPLICATIONS

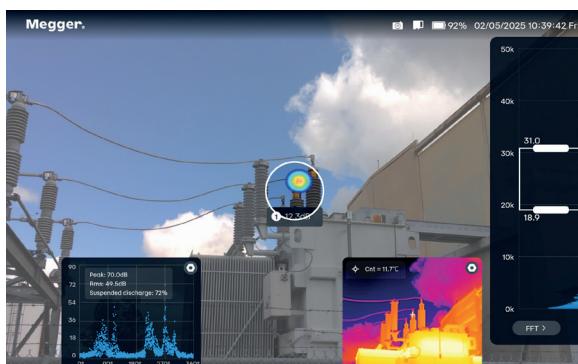
- Leak detection in compressed air and gas systems
- Predictive maintenance of mechanical systems
- High-voltage equipment inspections
- Industrial reliability and energy efficiency auditing

### 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

<b>Resolution</b>	13 MP
<b>Camera Focal Length</b>	4.3 mm (0.17")
<b>Nominal Frame Rate</b>	25 fps
<b>Field of View (FOV)</b>	Horizontal: 66° x Vertical: 52°

#### LED Light

4 Ultra-bright LEDs

#### Display

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

#### Communication and Storage

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

#### Battery

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

#### Hardware Ports

<b>USB-C 1</b>	USB 3.0 for charging, HDMI, data export
<b>USB-C 2</b>	USB 2.0, USB sensor, Thermal Module
<b>3.5 mm audio jack</b>	Headset output
<b>TF/microSD card slot</b>	64 GB card supplied

#### Analog input

4 Channel external analog sensor

#### Environmental

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

# MPAC208

## Megger Professional Acoustic Imager

### General Specification

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

### Safety

<b>General Safety</b>	IEC 61010-1
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### Electromagnetic Compatibility (EMC)

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

### Software

<b>Report types</b>
<b>Analysis</b>

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	Part number
MPAC208 acoustic imaging camera	1016-917	<b>Optional Accessories</b>	
<b>Included Accessories</b>			
Hand straps		Thermal imaging module (364 x 288 resolution)	1016-920
Shoulder strap		Thermal imaging module (640 x 512 resolution)	1016-921
Universal mains power charger		MPAC-V acoustic camera verifier	1016-919
USB-C charging cable		Spare smart battery packs	1016-924
Headphones		MPAC208 Pro Kit with MPAC208 Acoustic Camera, MPAC-V Verifier/Ultrasound Generator and Thermal Camera Module (640 x 512 resolution)	1016-922
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			

### SALES OFFICE

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### MPAC208\_DS\_EN\_V02

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