

Ring48 AC Pro

48 CHANNEL SYSTEM FOR 2D MEASUREMENTS



The 48 channel ring array is primarily designed for measurements in acoustic laboratories, but is also used in a wide range of other applications and environments, such as component testing and troubleshooting. The light carbon structure ensures easy handling and quick, precise array positioning.

This array design can be used universally and is the most popular in the array portfolio of gfai tech GmbH. The ring geometry ensures the greatest versatility and best possible local resolution of the acoustic map.

The array comes with an integrated Intel® RealSense™ Depth Camera which features Full HD resolution and the ability to record depth information.

BENEFITS

- Sources can be found independently of the set focus without acoustic smearing
- Easy handling and accurate microphone positioning
- Very precise sound source localization to see all sources in one acoustic map
- Suitable for the most diverse measurement environments

APPLICATIONS

- Innovative tool for fault detection and quality control
- Sound localization based on variations in sound emissions
- Engine measurements
- Beamforming measurements in acoustic labs
- Troubleshooting of medium and large sized measurement objects



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TECHNICAL DATA

Size and Weight

Array-body diameter	75 cm
Weight	1.8 kg

Features

Video camera	Intel® RealSense™ Depth Camera D435
	Optional: Baumer VLG-22C
Resolution	1920 x 1080 (Full HD)



Operating Conditions

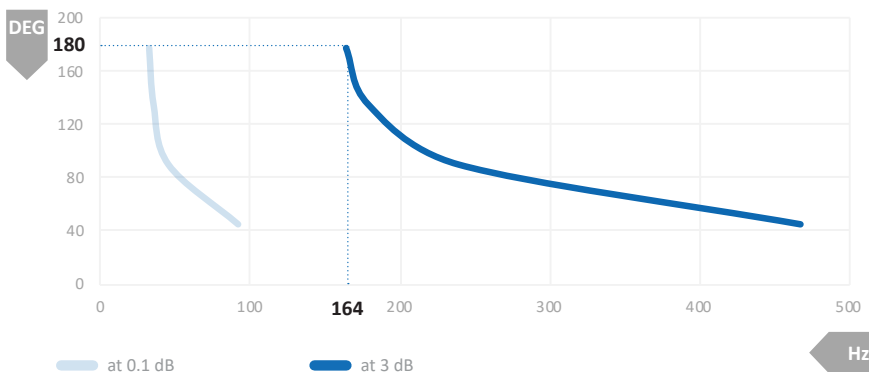
Ingress protection code	IP20
Cable length to data recorder	Up to 20 m (on request: 50 m)
Operating environment	0°C – 35°C, up to 80% RH (RealSense) 0°C – 45°C, up to 80% RH (Baumer)

Microphone Data

Microphones	Electret condenser capsule + special designed preamplifier
Frequency response	100 Hz – 15 kHz (< 0.5 dB) 20 Hz – 20 kHz (< 3 dB)
Max. sound pressure level	130 dB at 3% THD
Noise level	27 dB(A)
Sensitivity	20 mV/Pa

Array Data

Channels	48
Recommended measurement distance	> 0.5 m
Acoustic mapping range	12 dB – 130 dB
Recommended mapping frequencies	164 Hz – 20 kHz (60 kHz)
Dynamic range*	8 dB – 11 dB, up to 50 dB with Advanced Algorithms



Calculation of the lowest frequency (Hz) at 180° opening angle (DEG)

* Distance to the source: 1 m; calculation points: 90,000