vicPURE microphone arrays
Compact Reference Implementation for Spatial Audio Acquisition

The vicPURE microphone arrays are our reference implementations of compact microphones with directional audio recording.

They contain the latest algorithms of our vicPURE framework for spatial noise cancellation and speech enhancement. Four high-quality MEMS microphones and an audio DSP are integrated on a single circuit board.

Installed flat and unobtrusively behind a front panel, the intelligent signal processing achieves a predefined directional effect. This allows the source signals to be optimised and side noise to be suppressed.

The cleaned audio signal is output in analogue form or via a USB interface.

PRODUCT FEATURES

- 4-Channel microphone array with directivity
- USB audio streaming of the cleaned signal
- Analog output of the cleaned signal
- USB power supply, alternatively JST-ZH connector
- Visually unobtrusive installation behind surfaces
- High voice signal quality with low audio latency
- Driverless plug-and-play installation under Linux and Windows

APPLICATIONS

- Intercom systems and control stations in industrial environments
- Vehicle communication systems and infotainment solutions
- Emergency call points
- Voice-controlled devices and industrial systems
- Voice assistants
- Medical technology
- Intelligent displays

vicPURE mic array F2

The F2 type is designed to replace a gooseneck microphone and is optimised for audio pickup directly perpendicular to the board plane, comparable to cardioid microphones.
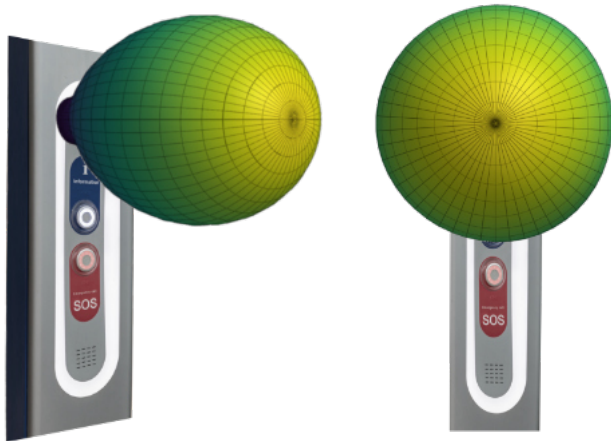Noise outside the recording area is suppressed as far as possible.

Fig. 1: Directivity vicPURE mic array F2
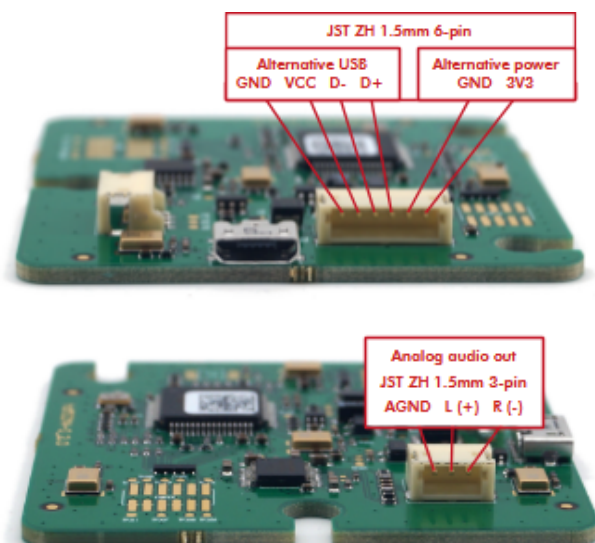
SPECIFICATION

Operational temperature:	-25 °C ... 85 °C
Power supply:	Micro USB (5 V / 0,2 A), altern.: 3.3V JST-ZH connector
Connection USB:	Micro USB, altern. JST-ZH connector
Connection analog audio:	JST-ZH connector

CONNECTION: DIGITAL VS. ANALOG

vicPURE mic array F3

The F3 type is not just a replacement for a conventional gooseneck microphone but a further development, as it is based on a vertical disk-shaped audio acquisition directly perpendicular to the board plane.
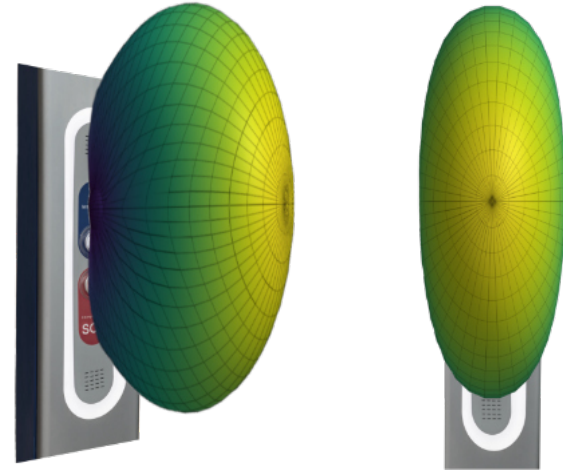This allows for a particularly large yet well defined audio acquisition area!

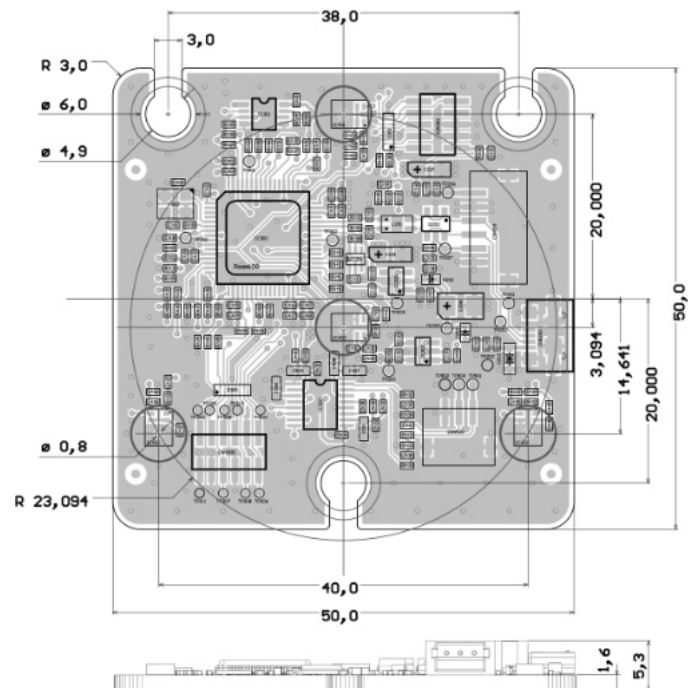

Fig. 2: Directivity vicPURE mic array F3

DIMENSIONS

Fig. 3: vicPURE mic array - dimensions in mm