

# SoC-Module for Hands-free Talking



Intercom systems and hands-free devices are used in many areas of life. Despite background noise and interfering noises, they should offer a natural, crystal-clear full-duplex communication.

Thanks to patented algorithms for acoustic echo cancellation (AEC) and noise reduction (NR), our vicCOM products provide excellent audio quality and speech intelligibility at the highest level - even under the most difficult environmental conditions.

The small audio processing module vicCOM 2 can be integrated as a component into customer-specific layouts or retrofitted to existing products.

## Product Features

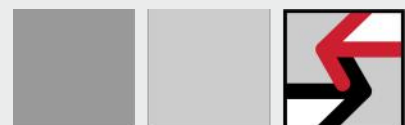
- Audio processing module for hands-free communication
- Assembly board with edge contacts
- Acoustic echo cancellation (AEC)
- Noise reduction (NR)
- Intelligent loss control
- Signal conditioning for microphone and loudspeaker signals
- Use and management of different parameter sets
- Parameters can be set during operation
- HD audio
- Recording and playback of audio files
- Software and parameters can be updated

## Applications

- Intercom
- Building and industrial communication
- Hands-free kits for cars, commercial and emergency vehicles
- Conference systems
- Hands-free kits in emergency phones

**vicCOM 2**

**Audio Processing Module.**



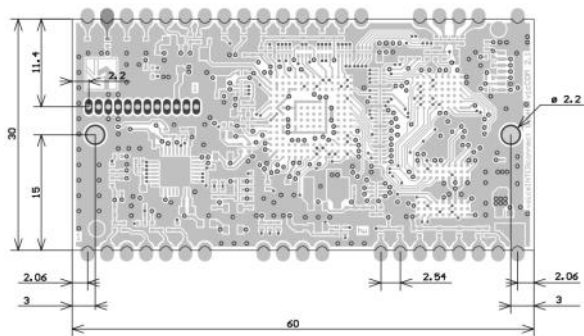
**voice INTER connect**

# Technical Data

## General Data

Power supply:	3,3 VDC
Current consumption:	Approx. 40 mA (max. 90 mA)
Connectors:	39 edgeboard contacts or 12-pin ribbon cable
Audio signal level:	0 dBV (= 1 V <sub>RMS</sub> )
Microphone amplifier:	-12 dB ... +55 dB
Flash memory:	8 MB
SDRAM:	16 MB (max. 128 MB)
Operating temperature:	-40 °C ... 85 °C
Dimensions:	60 x 30 x 4 mm (LxBxH)
Form factor:	Single-sided SoC-module
Weight:	Approx. 10 g

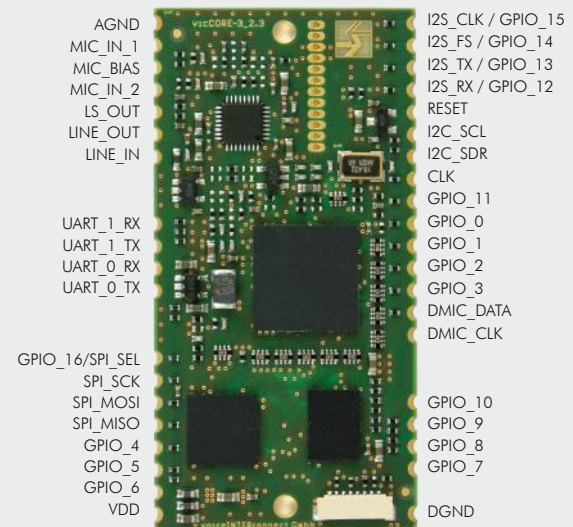
## Dimensions



## Ribbon Cable Connectors

Pin	Name	Description
1-2	I2C	I2C interface
3	VDD	Power supply (+)
4	LINE_IN	Audio input from target device
5	LINE_OUT	Audio output to target device
6	LS_OUT	Audio output to loudspeaker
7-8	UART_1	Interface for control
9	DGND	Ground for power supply
10	AGND	Analogue audio ground
11	MIC_BIAS	Microphone bias voltage
12	MIC_IN_1	Microphone input (+)

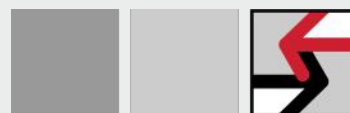
## Edgeboard Connectors



Pin	Name	Description
1	AGND	Analogue audio ground
2	MIC_IN1	Microphone input
3	MIC_BIAS	Microphone bias voltage
4	MIC_IN2	Optional microphone input
5	LS_OUT	Audio output to loudspeaker
6	LINE_OUT	Audio output to target device
7	LINE_IN	Audio input from target device
8-9	UART_1	Interface for control
10-11	UART_0	Alternative interface
12-15	SPI	SPI interface
16-18	GPIO	Programmable in- and outputs
19	VDD	Power supply
20	DGND	Ground for power supply
21-24	GPIO	Programmable in- and outputs
25-26	DMIC	Digital microphones (up to 2)
27-31	GPIO	Programmable in- and outputs
32	CLK	Quartz clock
33-34	I2C	I2C interface
35	RESET	RESET input
36-39	I2S	I2S interface

## vicCOM 2

Order Number: 31000700-20



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