



## Company Profile

### Speech Connects. People and devices.

As a leading technology expert, voice INTER connect delivers solutions for voice control, acoustics and digital voice communication as well as hands-free operation and noise cancellation.

Communication products have been our daily business since 2001. As a development and integration partner, we accompany our customers with innovative ideas, extensive know-how and a results-oriented approach from the project idea to series production.

Ready-to-use electronic modules, many years of experience in markets such as commercial vehicles, medical technology and industrial automation, as well as our 30-strong interdisciplinary team of experts are the prerequisites for achieving each project's development goal economically and quickly, and thus inspiring our customers in the long term.

#### MAIN ACTIVITIES

- Intercom - smart electronic modules for customised communication solutions
- Speech processing (voice control, speech synthesis, dialog development)
- Solutions for signal processing
- AI-based signal classification based on machine learning and Deep Neural Networks
- Audio and acoustic measurements
- Embedded software development
- Hardware development

#### SOLUTIONS

- Hands-free communication and multimedia in cars, commercial and emergency vehicles
- Communication systems for industrial intercom products: emergency call stations, elevators, hospitals, passenger information systems (based on various transmission media: analogue, VoIP, mobile, 2-wire bus)
- Local and cloud-based voice control and dialog systems for machines, medical devices, door communication and smart home
- Cerence speech synthesis solutions

## SPEECH DIALOGS

- Creation of user-centered speech interface design (SUI)
- Functional analysis of target applications, semantic modelling and user adaptation
- Vocabulary and dialog creation in 30 languages
- Integration in target application or device
- Optimisation of robustness in the target environment
- User-centered validation
- Server-, cloud-based, hybrid and embedded speech recognition

## SIGNAL PROCESSING

- Beamforming, beamsteering, dereverberation
- Real-time transmission of audio / video data via proprietary bus protocols, embedded streaming, compression, real-time ethernet support
- Processing: AEC, NR, CAD, audio / video quality enhancement, embedded video codecs

## AUDIO MEASUREMENTS

- Optimisation of speech intelligibility for hands-free devices and communication systems
- Acoustic evaluation of audio systems
- Consideration of real environmental conditions (digital twin)
- Specific measurement protocols for each scenario
- Workshops for the evaluation of measurement results

## INTERCOM SOLUTIONS

- Development of digital audio and video communication systems
- Multimedia applications and synchronised audio playback via IP-networks
- Acoustic product design
- System diagnosis and troubleshooting

## EMBEDDED SW / HW DEVELOPMENT

- Integration and customisation of SIP frameworks
- System integration and open source software
- Firmware and driver development for RTOS and Linux
- Hardware development - from prototype to series
- Support in product launch

## vicCONTROL

- vicCONTROL go kit: development kit for the individual configuration of voice control
- vicCONTROL go stamp: miniaturised module for local voice control of devices, machines and plants
- vicCONTROL industrial: voice control software for ARM and x86 platforms

## vicCOM

- vicCOM 2: intercom module for hands-free talking and noise reduction
- vicCOM complete 2: system kit for hands-free talking and integration in communication applications
- vicCOM IP: IP-based communication and automation platform with voice control
- vicCOM ART: 2-wire intercom unit with digital bus for simple communication systems
- vicCOM GSM 2: intercom unit for communication, with sensors and door automation via LTE and GSM network

## vicDIVA - Distant Voice Acquisition

Automatic speaker localisation and robust acquisition of speech signals in rooms via microphone array and beamforming.

## vicHSES - Hands-free Speech Enhancement Suite

Signal processing library with algorithms for speech quality enhancement, acoustic echo cancellation and noise reduction.

## vicMSES - Multichannel Speech Enhancement Suite

Signal processing library with algorithms for beamforming, noise localisation and dereverberation.

## vicMEDIA

VoIP / SIP framework for speech and video communication as well as media streaming and public address systems in IP networks.

## CONTACT US NOW

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