

Intercom Units for distributed Communication Systems via audioRTBUS

The intercom units vicCOM-ART of voice INTER connect are equipped with a hands-free functionality in full-duplex quality. The audioRTBUS (ART) allows bus communication between two or more intercom units over high distances (up to 1000 m) or synchronous sound playback from one source node to all target nodes. The conditions for setting up communication links between two or more units can be flexibly configured. Thanks to the central power supply via audioRTBUS, the compact size and versatile audio and data interfaces, vicCOM-ART is suitable for a wide range of applications.

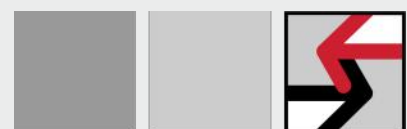
Product Features

- Audio processing modules with audioRTBUS interface
- Full-duplex audio communication and hands-free talking
- Processing of several, parallel audio streams (e.g. speech, noise, music)
- Acoustic echo cancellation (AEC) and noise reduction (NR)
- Analog and digital audio interfaces
- User interface (e. g. buttons, LEDs)
- Interfaces to existing systems possible (telephony, 3G)
- Power supply via audioRTBUS

Applications

- Distributed communication systems for audio and data transmission
- Intercom systems and emergency call systems in buildings and elevators
- On-board communication (e.g. ships, trains, public transport)
- Voice communication in emergency vehicles
- Surveillance or announcement / broadcast in public buildings
- Industrial process monitoring and control

vicCOM-ART
Low-cost Intercom.



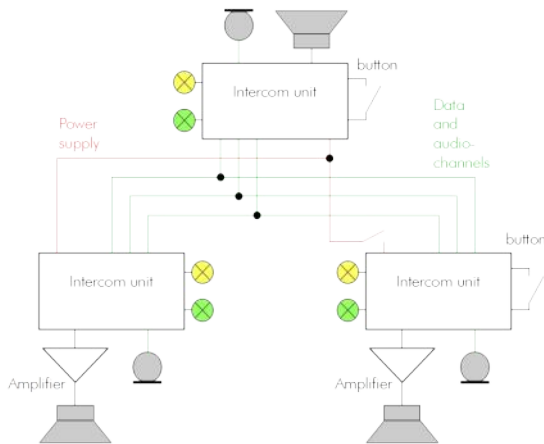
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Components and Functional Principle

Several intercom units form a distributed communication system which can transmit audio signals, measurement data and control information via two bus wires.

Due to the low deterministic latencies of the bus protocol and the synchronous data transmission, vicCOM-ART is particularly suitable for audio and communication applications.

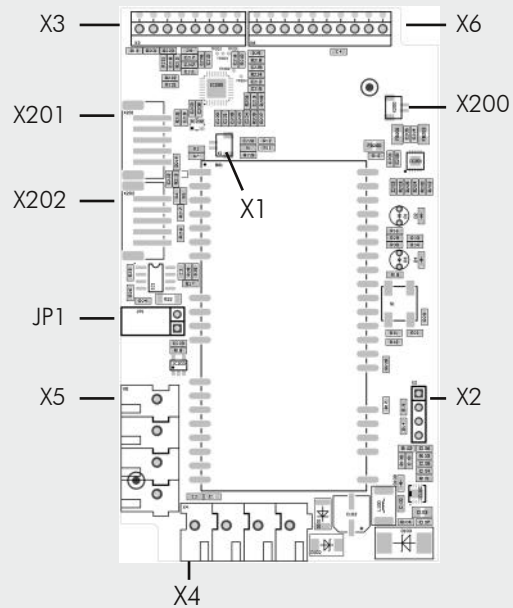
Example for a Communication System



Picture: Communication system with 3 x vicCOM-ART intercom units

- Acoustic echo cancellation (AEC)
- Adaptive noise reduction (ANR)
- Parameterization interface for the audioRTBUS and the signal processing
- Software can be updated (local and over audioRTBUS)
- Up to 256 nodes per bus segment
- Control and transmission of display and operating elements (LEDs, buttons etc.)
- Interfaces for further sensors and actuators
- Analog and digital audio interfaces
- Up to 4 microphones can be connected
- Integrated speaker amplifier (2.6W)
- Amplifier (10W) optionally available
- Power supply: 8-32V

Pin Assignment



Pin	Name	Description
X1	MIC_IN	Analog microphone
X2	UART_0	Serial control interface
X200	LS_OUT	Loudspeaker output
X201	DMIC_IN1	Digital microphone
X202	DMIC_IN2	Digital microphone
X3	LINE	Audio interfaces to target
X4	RS485_1	audioRTBUS Interface 1 and power supply
X5	RS485_2	audioRTBUS Interface 2 and power supply
X6	CTRL	Control interface (UART, GPIO)
JP1	JP1	audioRTBUS termination

vicCOM-ART

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