

## Future Visions of Audio Solutions

Who is 2wcom Systems? We are a broadcast technology-driven company in Flensburg (Germany), which is in direct neighborhood to Denmark. 75% of our crew are engineers. This comes along with a very concentrated knowledge for developing Audio over IP, MPX over IP, DAB, SAT and FM/RDS soft- and hardware solutions. Worldwide customers benefit from our long-time experience.

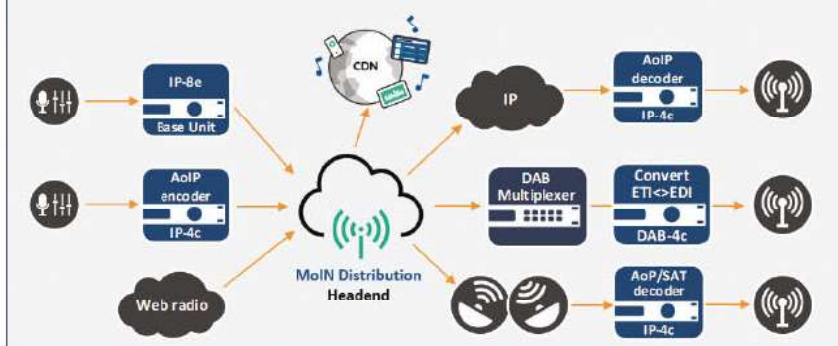


We contribute to the success of our customers by providing high-quality equipment and first-class customer service. Right now, harmonization of old and new transmission technologies is crucial, especially since nobody can ignore the advantages, that IP based multimedia network systems offer. Hence, solutions are mandatory to link studio, distribution, and streaming.

correction assure to overcome even stressful conditions. The solutions support all standards for Audio over IP interoperability. Also, compatibility is increased by considering the different frame sizes of audio codecs (AAC

profiles, OPUS). As a conclusion, the supported protocols and audio formats keep the independence of each studio and enable to forward the contributions to the headend. The on-demand scalability of all features allows for easily managing a wide range of broadcast applications (Studio2WAN, SIP network, MPEG TS multiplexing, synchronized playout, FM2TS gateway...).

### Linking studio, distribution and streaming



To support broadcasters in these times of rapidly evolving technologies, our team of engineers developed the 4audio series. A broadcasters "Swiss Army Knife" combined with "Quality made in Germany", designed for studio or transmitter links, streaming, and the multimedia working methods. Its heart is a Linux based, embedded software which allows for flexibility in system design, whether the need is for hardware, software to run on VM or in the cloud, or remote-control. The software is 100% developed by 2wcom, hence no struggles with third-party open-source software.

#### 4audio IP: IP-4c codec, IP-8e encoder, IP-8m phase-locked codec

All devices provide facilities for audio interfaces, transport, transcoding, streaming, or synchronization. Robustness mechanisms by source, stream, and error

#### MoIN software: MoIN Studio, MoIN Distribution, and MoIN Streaming

The MoIN Multimedia over IP Network software just says hello to the networks and connects them in a friendly manner. MoIN follows the same technical concept as the 4audio IP boxes. It fulfills various use-cases in the studio, in distribution or in streaming. The software consists of several containers that can be run separately and isolated to achieve good scalability and reliability of the system. Bringing

up a container is done in 5 seconds, and the software allows the activation of up to 512 channels. MoIN can be easily adapted to any studio environment. Besides, the transcoding facilities of the software allow the direct feeding of distribution systems such as DAB+, IP, or satellite respectively.

Thank you for your time. Please contact Berry, Sönke, Mark, and Anke for more information or to meet and greet the IP, DAB, and MPX 4audio family members: [sales@2wcom.com](mailto:sales@2wcom.com)

## Q: Why is the 4audio IP series a swiss army knife?

## A: Just because of the multitude of features!

- ▶ Runs as a box, on VMs or in the cloud
- ▶ Studio to WAN bridge
- ▶ Streaming encoder
- ▶ On-demand channels & features
- ▶ Multi-format transcoding: FM, DVB, DAB, AoIP
- ▶ Remote management
- ▶ Multi-layered redundancy
- ▶ Precise synchronization
- ▶ Phase-locked multi-channel codec

