

# 2wcom Highlights Latest Product Innovations

With a proven track record 2wcom is an established worldwide manufacturer and supplier of professional broadcast products in the fields of AoIP, FM, RDS, DAB, DAB+, DVB-S, DVB-S2 solutions...

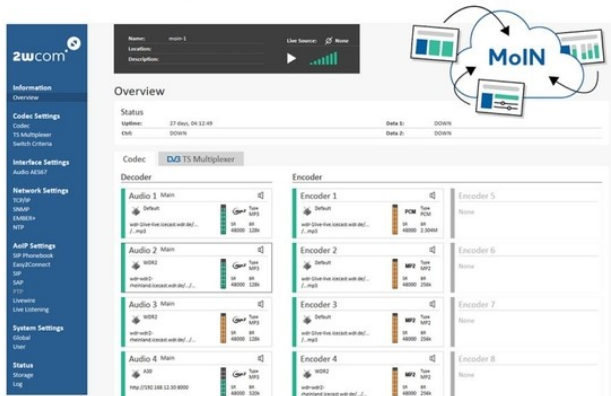


## MoIN server software offers audio services in the cloud

2wcom's Multimedia over IP Network (MoIN) server software is a containerised solution that provides all functionalities that traditional hardware audio over IP codecs have implemented. In contrast to hardware codecs the software offers vast scalability options no matter, if it is run in the cloud or on premise.

Thanks to its realisation as a containerised service the operator can make use of the pricing benefit for containers compared to VMs on all major cloud platforms such as AWS, Microsoft Azure or Google Cloud. The reason for the better price is that in contrast to a VM containers don't need allocated resources like vCPUs or RAM - they just consume what the need to. Moreover, the use cases of the software are very different, examples include:

- **Iccast to DVB Transport Stream Transcoding** - This is used by a number of customers who want to make web streams available on a DVB transport stream that can be sent in cable networks or via satellite.
- **Streaming Encoder** - The software can also be used to feed a streaming encoder for example the Wowza streaming cloud. Or, 2wcom's solution transcodes the audio signals to adaptive bitrate protocols like HLS that can be distributed to the end customer by using a CDN.
- **AES67 to WAN bridge** - With a great number of supported audio over IP protocols the MoIN can transcode signals from studio networks that use AES67, Dante, Wheatnet, Ravenna or Livewire+ to a format that is suitable for wide area networks. For example the studio signals can be transcoded to Opus for a low bitrate transmission with SMPTE 2022 conform error



2wcom's MoIN server software

protection or using Secure Reliable Transport (SRT). That enables a studio-to-studio bridge that can overcome even stressful network conditions.

- **On demand transcoders** - The server software offers scalable activation of codecs. This allows a flexible handling of alternative audio streams such as audio description of a video, to guarantee accessibility for blind and visually handicapped persons. Or, if a contribution is produced in accordance to the multi-media method operators are enabled to process the simultaneously produced audio commentaries for the video, stations website, social media and the radio.

Business models like software-, platform- or infrastructure-as-a-service have already become very common. Therefore, 2wcom offers regular upfront payments as well as pay-as-you-grow and temporary licenses to emphasise the scaling capabilities of the software on the commercial side. In addition, besides supporting the virtualised approach the MoIN server software is also available for hardware boxes to give technicians the utmost scope when planning a new system.

## 4audio MPX solution - Flexibility In Distribution

The company says, the new MPX products offer numerous system design options. It is based on customer requirements for MPX generation, manipulation, distribution and economic aspects. To connect the studio and the MPX link, inputs for analogue audio, AES/EBU and Audio over IP are provided. Whereby all known standards for Audio over IP streaming, control and status query are supported. All main modules like stereo generator, RDS encoder or MPX codec are software based and easy to activate. For operators, this leads to a multitude of facilities.

Technicians are enabled to generate the MPX signal to fit the station's needs. It is possible to assemble the whole MPX signal, including audio, pilot and RDS for high-quality 100% lossless transmission.

If bandwidth economy is an issue the solution offers several opportunities starting at the stage of signal generation. It's possible to create the MPX signal just including audio and pilot. In this case RDS data is forwarded separately or is only

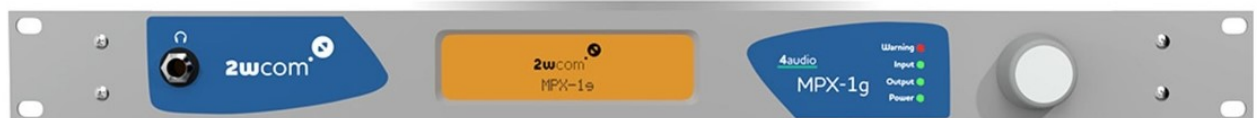
assembled at the regional studio located at the transmitter site. In addition, broadcasters can choose to use a compression algorithm for lower bandwidth IP connections and narrow band STL channels.

The opportunities at the transmitter site are directly linked to the idea of flexibility at the studio. Besides just forwarding the fully assembled MPX signal to the transmitter it is also possible to manipulate it at the receiving site. For example, splitting the MPX signal into its components and substituting the RDS data with regionalised RDS information, if needed. Or, the local RDS data is added at the transmitter site's local studio in case the forwarded MPX signal only includes audio and pilot.

Moreover, it is also possible to distribute the MPX signal via satellite by MPE encapsulation at the studio and by an optional satellite tuner available for 2wcom's receiving units.

This is an advantage when satellite bandwidth is more economical, or coverage should be increased for regions still lacking broadband IP. Consequently, it is also possible to establish source redundancy by forwarding the station programme via IP and satellite in parallel and switch to the best source available at the transmitter site.

Coming back to the innovative modularly configurable concept of the 4audio series. If the aim is just to transmit the assembled MPX signal 100% lossless to the transmitter, the IP-4c four channel codec supports this approach perfectly. In any case of signal generation or signal manipulation, a product of the 4audio MPX series has to be chosen equipped with the respective software modules, such as RDS encoder, stereo generator or MPX codec. ■



2wcom 4audio MPX device