Mandozzi audio solutions

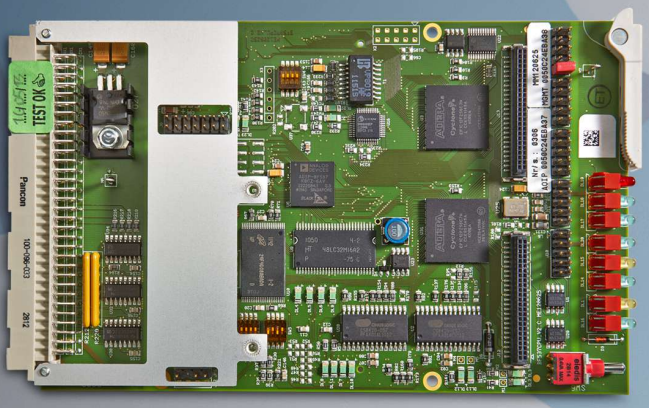
SWISS MADE

UMAC

Audio over IP codec

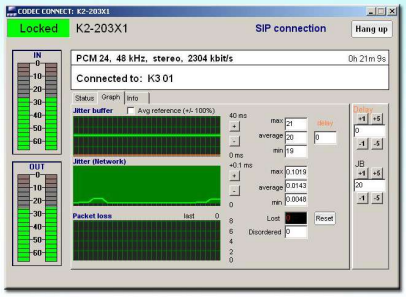
The Universal Multifunctional Audio Codec

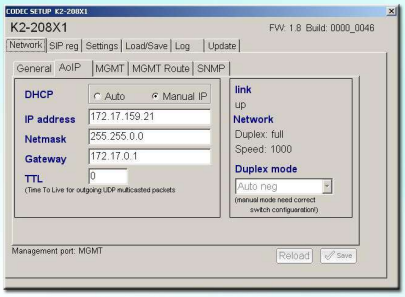
UMAC is a compact audio over IP codec that can be mounted onto various supports in order to satisfy distinct applications:
UMAC-C is a 4 HU stand alone codec with a front plate that carries the audio and IP signals and can be mounted into various cabinets with their own power supply, **UMAC-M** is a 3 HU module that can be integrated into Mandozzi's matrices and mixers, where it is connected to the internal audio bus. **DT11** is a 1 HU, 19" rack with two UMAC-C slots, each with its individual power supply module.
Our goal was to develop a compact Audio Over IP module that can be used in various applications, therefore we call it "Universal Multifunctional Audio Codec". It is a small printed circuit board (100x115 mm) with micro controller/field-programmable gate array/digital audio signal processor. The UMAC basic module performs flexible, software programmable audio coding and signal management. It respects the **EBU N/ACIP** standards.



Stand alone Audio Over IP codecs

UMAC-C is a 4HU module similar to the *COMBIMUX* interface modules that are in operation by thousands in 2Mbps contribution and distribution networks. The codec carries all external connectors on its front panel: Two female XLR connectors for the audio input and two male XLR connectors for the audio output. The interfaces can be set by software for analogue or AES/EBU audio signals. The trasmitted and received audio signals can be monitored on two separate 3.5 mm stereo jack connectors with individual volume control. There are two separate RJ45 connectors on the front panel, the left one is dedicated to the audio stream, the other is for the UMAC-C management.





UMAC integrated into Mandozzi's routers and mixers

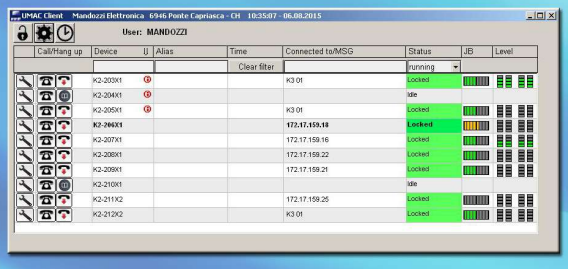
For all those who want to integrate Audio Over IP modules into their *IDEA* intelligent audio matrix, Mandozzi designed **UMAC-M**. They are Europe format (3HU) printed circuit boards that can be inserted into matrix and mixer concentrators individually or in a UMAC-M pool. Up to 16 modules fit into a 19" frame of 3HU. The UMAC-M are configured, controlled and monitored either by the supervisor of the *IDEA* router, by the mixer operators or by the Client/Server tools. They are completely integrated into matrix control software, thus are also automatically controlled by the sophisticated scheduler.

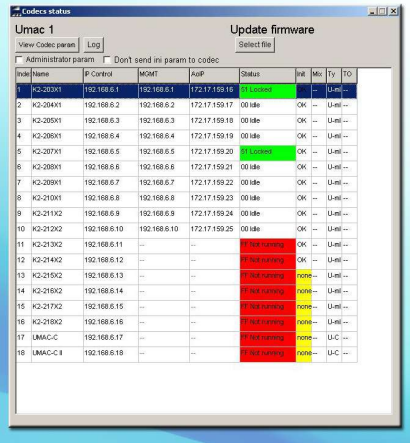
Features

- Configurable jitter buffer, packet size and delay
- MECLI (Mandozzi Command Line Interface)
- Internal or external sync for digital signals
- Compliant with N/ACIP specifications
- Independent RJ45 audio stream port
- SIP compliant with EBU-Tech 3326
- Transmission of ancillary data
- ToS (type of service) setting
- Unicast and Multicast (SAP)
- Forward Error Correction (FEC RFC 2733/5109)
- Adaptive jitter buffer
- **Touch display**
- **Web interface**
- SNMP v1/2/3
- Auto recall
- STUN
- DHCP

Algorithms

PCM 16,20,24 bit • ISO-MPEG2
Enhanced APT-X • OPUS (RFC 6716)
ITU-T G711 / G722 • ISO-MPEG1 Layer II and III
AAC LC, HE, HEv2, LD, ELD





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