

Multi-channel DAB+ Audio Encoder

MAGIC DABMUX *plus* ENCODER EDITION



General

The DSP-based system **MAGIC DABMUX plus Encoder Edition** allows the encoding of up to 10 DAB+ programmes in a 19" x 1 U unit. For the feed of PAD (Program Associated Data), per encoder a PAD inserter is integrated, which allows an easy input of Dynamic Labels (DLS / DLS+) and Slideshows (SLS / categorised SLS). The insertion of additional information can be done via FTP or via a modern JSON/XML based API.

The system is synchronised either via NTP or, with AES67 audio feed, via PTPv2.

For encoding, the DAB+ encoder developed and licensed by the Fraunhofer Gesellschaft is used, which offers the best possible audio quality - even at low data rates.

Each DAB+ encoder can be licensed individually, so that the system can be easily expanded for newly added programmes.

Audio input & monitoring output

Audio input is either via AoIP AES67 streams or as Icecast/SHOUTcast web streams (MP3 or FLAC format, 16 bit, 48 kHz).

If AES67 is used, two AES67 stereo outputs (4 channels) are automatically available for monitoring purposes. Via the HTML5 web interface, any programme can be conveniently selected and monitored via AES67.

- DSP-based DAB+ Audio Encoder
- Up to 10 encoders in a 19" x 1 U system
- PAD inserter for DLS and SLS
- Audio input via AES67 or Web Stream
- Monitoring output via AES67
- Support of EDI(ETI), EDI(STI-D) and AVTMUX
- 3 x GBit Ethernet
- Configuration via Web browser
- Synchronisation via NTP or PTPv2
- SNMP v1 / v2c
- Ember+
- Extension slot for
 - Dual LAN module
 - Ravenna module
- For future extensions:
 - 2 x USB 2.0
 - 1 x SD card slot
- Redundant power supply (optional)

Encoder output

The output signal can be sent via unicast or multicast to up to two locations as a simulcast stream. The output format EDI(ETI), EDI(STI-D) or AVTMUX can be set individually for each programme.

In addition to the separate programme output signals, an output in EDI(ETI) or EDI(STI-D) format is available which can transport all programme contents of the system in a common data stream.

Interfaces & extensions

As standard, the system has three GbE interfaces, so that a physical separation between management, AES67 and web stream feed is easy to realise.

If required, the expansion slot can be equipped with the Dual LAN module (2 x 10/100Base-T), so that five Ethernet interfaces are then available.

In the future, a RAVENNA module will also be available, which enables a fully redundant RAVENNA/AES67 stream feed. The module also supports the NMOS standard.

For future extensions, two USB interfaces and an SD card slot are also available.

A redundant power supply is optionally available for maximum reliability.

Management & monitoring

Monitoring and configuration is possible via an HTML5-compatible web browser.

All available encoders can be clearly displayed in a dashboard.

The audio levels of all programmes as well as the DAB-specific parameters such as sampling rate, mode, data rate, etc. are displayed. In addition, warnings and alarms for the input signals are visible.

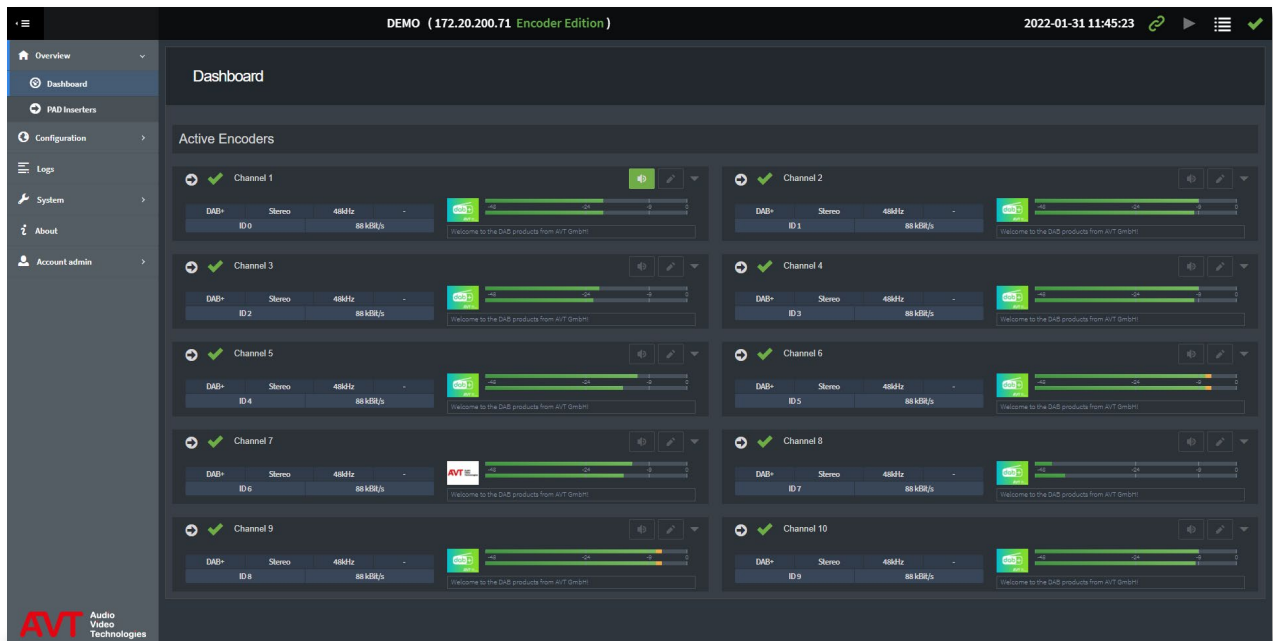
With local input from PAD, the current dynamic label and the current picture of a slideshow are also displayed individually for each programme.

A detailed log file is also available directly in the browser.

The SNMP v1 / v2c protocol is integrated for connection to network management systems.

The EMBER+ protocol, which is widely used in the broadcast sector, is also supported.

Up to 10 workplaces can access the system simultaneously for configuration and monitoring. Three roles - *admin*, *operator* and *guest* - with different authorisations are implemented for user access.



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